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DETROIT

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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CHEVROLET'S FALL SALES PROGRAM PUT AT 300,000

Klingler Discloses Big Quota at Dealer Convention

Special from A. D. N. Detroit Bureau

DETROIT, Aug. 15.—H. J. Klingler, vice-president and general sales manager of Chevrolet Motor Company, told 2,000 Chevrolet field men in convention here that the company's sales quota from September 1 to January 1 was to be 300,000 cars.

"Chevrolet never fell short of achieving a sales quota in its history," said Mr. Klinger. "We built our 1,000,000th six cylinder car August 5. Every day since then our nine assembly plants have been producing cars at the average rate of 6,500 a day. By January 1, adding the remaining portion of August to our last four months quota, we will have sold more than 1,350,000 automobiles."

With all of the 2,000 delegates on hand Chevrolet convention opened yesterday in the Masonic Temple. The first day's meeting was regarded by Chevrolet officials as the most important of the week's proceedings. It was at this session that Mr. Klinger outlined the sales program as stated above.

The first session, unlike many business meetings, was not lacking in a novel method of presentation. Playlets, designed to bring home to

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Addresses Sales Staff

H. J. KLINGLER, vice-president and general sales manager of Chevrolet Motor Company.

FORD TO BUILD PLANT ON MONTENEGRIN COAST

New York, Aug. 15.—Dispatches received here today from Belgrade stated that the Ford Motor Company has decided to build an assembly plant at Antivari, on the Montenegrin coast, from which the Balkan markets will be supplied with Ford cars and trucks. Parts will be sent from this country.

Advices received from Moscow said that the Austin Company, Cleveland contractor, had been awarded the contract for the construction of the large automobile factory for the Soviet government of Russia at Nizhni Novgorod.

G. M. Sales in July Exceed Year Ago by Good Margin

New York, Aug. 15.—During the month of July General Motors dealers delivered to consumers 181,851 cars, according to an announcement by Alfred P. Sloan, Jr., president. This compares with 177,728 for the corresponding month last year.

Sales by General Motors manufacturing divisions to dealers amounted to 189,428, or an output of 7,900 cars per day, as compared with 169,473 for the corresponding month last year.

The following tabulation shows monthly sales of General Motors cars by dealers to ultimate consumers and sales by the manufacturing divisions of General Motors to their dealers:—

	Dealers' Sales to Users.		Divisions Sales to Dealers.		
	1929.	1928.	1927.	1929.	1928.	1927.
January	104,488	107,278	81,010	127,580	125,181	99,367
February	138,570	132,029	102,025	175,148	169,232	124,426
March	205,118	183,706	146,275	220,391	197,821	161,910
April	223,303	209,367	180,106	227,718	197,597	169,067
May	214,870	224,094	171,364	220,277	207,325	173,182
June	194,705	206,259	159,701	200,754	186,160	155,525
July	181,851	177,728	134,749	189,428	169,473	136,909

These figures include passenger cars and trucks sold in the United States, Dominion of Canada and overseas by the Chevrolet, Pontiac, Oldsmobile, Marquette, Oakland, Viking, Buick, La Salle and Cadillac manufacturing divisions of General Motors.

HIGHWAY BILLS TO BE PRESSED

Senate to Be Asked to Rush Action on Federal Aid

By FRANCIS P. DAILY

Washington, Aug. 15.—When the Senate reconvenes next Monday sponsors of the bill introduced by Senator Phipps of Colorado will press for action on the proposed appointment of a commission to make a thorough study of a national system of express motor highways which the measure would authorize.

Another bill fathered by Senator Brookhart of Iowa provides for the establishment of seven main arterial highways with numerous auxiliary links reaching from coast to coast and from border to border.

These highways, under the terms of the Brookhart measure, would be built by the states and the Federal government co-operatively and $2,000,000,000 would be made available by the latter to carry out its part of the project.

In addition to these measures there are others pending before Congress which would authorize increases in the Federal-aid road building fund, which for years has remained stationary at $75,000,000 annually, despite the pressing need for greater road improvement.

Although the tariff will consume the major part of the work of the special session of Congress, the problem of greater building is assuming immense proportions before the Senate in line with the Hoover administration's farm policy.

Since it requires considerable time to build good highways, Congress is being urged to speed up action on all pending measures.

CORD PURCHASES COLUMBIA AXLE

Auburn Interests Buy 50 Per Cent. of Capital Stock

Cleveland, O., Aug. 15.—Purchase of 50 per cent. of the capital stock of the Columbia Axle Company by the Cord Corporation, the new holding company for the Auburn automobile interests, was announced here today.

This affiliation gives the Auburn and Cord companies their first automotive parts manufacturing concerns and is another step in the expansion program designed to

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DROP IN OUTPUT OF CARS IS SEASONAL, SAYS COL. AYRES

Curtailment Indicated By Decline in Casting Orders

By KENNETH S. BEALL

CLEVELAND, Aug 15.—Automobile production figures for the month of August in all probability will fall to levels approaching those of last winter, in the opinion of Col. Leonard P. Ayres, vice-president of the Cleveland Trust Company, and a noted business forecaster.

In spite of that outlook, Col. Ayres sees nothing startling or discouraging in the prospect. He bases his prediction on orders in the hands of makers of malleable castings.

Col. Ayres

The decline in automobile production is a seasonable one, and probably will be followed by a brief autumnal spurt, he believes. In his monthly business forecast, Col. Ayres presents a graph showing how automobile production follows the output of castings.

He says:—

"The output of new automobiles declined sharply during July, and

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Bus Topics Slated for A. E. R. A. Convention

Atlantic City, Aug. 15.—Announcement was made today of the program which has been arranged for the American Electric Railway Association Convention which will be held here September 28 to October 4. The convention returns to this city after a period of three years, and will meet at the new auditorium, which has been called the "greatest in the world."

The convention is scheduled to begin on September 28, but the first business meeting is to be held Monday morning, September 30, opening on the general subject, "Today's Transit Task."

Three leaders in the industry will discuss this subject from the standpoint of what good service really is, what it has done and ways of modernizing human organization of local transportation.

After luncheon it is planned to take up industrial relations, fares, interurbans, new cars and city operation of buses.

"Traffic Regulations" will occupy the assembly on the second morning, Tuesday, October 1. On this subject the cost of traffic congestion, methods of increasing street capacity and basic handling principles will be discussed, and a capable and well-rounded system for handling of outstanding problems facing every local transit company will be offered for approval.

Educational training and small city problems as well as interurban and long distance operation of buses are on the agenda for luncheon. Public relations and traffic will be resumed.

International transportation authorities will discuss various problems of peculiar interest to the industry through the medium of the talking motion picture at Wednesday morning's meeting of the advisory council. Award will be made at this meeting of the Charles A. Coffin prize.

These activities will be enhanced by an inspection of exhibits which is said to be the best ever had by the association. The entire floor space of the large auditorium has been sold to exhibitors.

The luncheon meeting will be interspersed with short talks on such pertinent subjects as: Manufacturers' interest in public transportation, merchandising, maintenance of buses and financing and taxation.

Thursday, October 3, will open with a discussion on "Progress." In this direction discussions will take place on the benefits of unified transportation and the outlook of interurbans. Inquiry will be made into what the public wants and an effort will be made to construct a clear and concise picture of the future demands which the transportation companies will encounter The morning will close with remarks of an advisory nature from a prominent citizen-manufacturer-rider.

During the luncheon period the problem of freight will come up for consideration and then the trend will turn to the more aesthetic side of the industry. Under this heading will be discussed problems of publicity and advertising, and finally the design of buses. Safety in design will also be included.

An interesting round of entertaining features has been arranged by the committee for the pleasure of the visitors. Music will be supplied by Roger Wolf Kahn and his orchestra, and golf, bridge and other forms of entertainment have been included.

Reduced rates are being offered by all railroads, and members are being advised of this by special pamphlet.

GOODYEAR CLOSES PLANT OF MARATHON TIRE CO.

Akron, Aug. 15.—The Goodyear Tire and Rubber Company has closed the plant of its subsidiary, the Marathon Tire and Rubber Company, in Cuyahoga Falls, and has transferred the activities of the plant to the Akron factory, to give greater savings through mass production. The Marathon line will be continued with the addition of a new supertire.

U. S. TOURISTS IN CANADA SPENT $167,000,000 IN 1928

Montreal, Aug. 15.—United States automobile tourists spent $167,000,000 in visiting Canada last year, the Dominion statistician reported. This is $33,000,000 in excess of the amount thus spent in 1927.

Ethyl Quality Raised, but Cost to Refiners Is Cut

New York, Aug. 15.—An increase in the anti-knock standard of ethyl gasoline and a decrease in the cost of ethyl fluid to refiners is announced by the Ethyl Gasoline Corporation, owned jointly by General Motors and the Standard Oil Company of New Jersey.

The new policy, applying to the more than fifty leading oil companies in the United States and Canada, affects both the oil and automotive industries. The higher anti-knock value imposed keeps pace with the increased compression of motor cars which has been going on during the past two years and which is producing greater efficiency and economy, according to the announcement by E. W. Webb, president of the corporation.

Considerable pressure, it was said, will be placed upon the whole oil industry to improve not only its premium anti-knock gasoline but also its regular gasoline.

Further increases in anti-knock values and corresponding price cuts were forecast by Mr. Webb in a letter to licensees predicting a continued advance both in automobile manufacture and in the quality of motor fuel.

Consumption of ethyl gasoline in 1929 will, it is estimated, show an increase of approximately 100 per cent. over 1928. Production this year will reach 1,145,000,000 gallons as against 575,000,000 gallons in 1928.

Nearly 10 per cent. of all the gasoline used in the United States is now treated with ethyl fluid, the chief constituent of which is tetraethyl lead, and which, when mixed with ordinary gasoline, forms ethyl gasoline.

Gasoline containing tetraethyl lead has been marketed in the past with sufficient of this product present to meet the demands of high compression engines, the announcement explained.

The corporation now goes a step farther in requiring a future standard of ethyl gasoline equal to the addition of one-fourth of a cubic centimeter of tetraethyl lead to the existing standard, the maximum amount added to gasoline remaining at three cubic centimeters as heretofore.

Owing to the larger production of tetraethyl lead for mixing with gasoline, a substantial reduction in the price of the fluid to ethyl licensees makes it possible for these refiners to meet the new standard at a lower cost, it was stated.

Ethyl fluid has been sold to refiners on the basis of five-tenths of a cent per cubic centimeter of teraethyl lead, plus a gallonage charge of seven-tenths of a cent assessed against each gallon treated.

Under the new price basis, lead is sold to refining licensees at four-tenths of a cent per cubic centimeter, a 20 per cent. reduction, while the gallonage charge has been reduced to six-tenths of a cent, or a reduction of about 14 per cent. The minimum cost to refiners for bringing ethyl gasoline to ethyl standard on the new basis will, therefore, be one cent, while the maximum of three cubic centimeters will be 1.8 cents.

"We believe this increased anti-knock value is but keeping in line

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ETHYL STANDARD UP, COST DOWN

New Policy Affects Fifty Leading Oil Companies

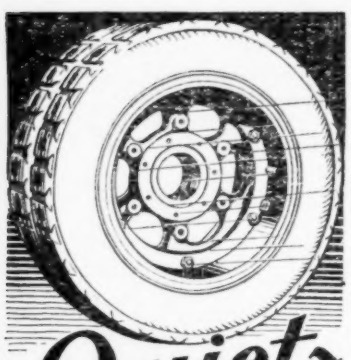
(Continued from Page 1)

with improvements that have been made and are going on in the automotive and refining fields," said Mr. Webb's letter to refiners. "Most automobile manufacturers have increased the compression of their cars within the last two years, with consequent increased efficiency and economy.

"In improving our standard we are doing so not only at no additional cost to any customer, but to each there is a reduction in the unit cost per gallon of gasoline treated. This is accomplished through the reduction in gallonage charge from seven-tenths of a cent to six-tenths and the price of tetraethyl lead from five-tenths of a cent to four-tenths per cubic centimeter of lead.

"As we view the anti-knock picture today and the trend of events we think that the soundest foundation is a policy of gradually increasing our standard, provided we make a proportional reduction in price, and to go a step further—if we believe conditions will justify it—by reducing the price so that refiners will be able to meet such gradually increased standard at less cost."

Indianapolis, Ind., Aug. 15—Denny Duesenberg, 15-year-old son of Fred S. Duesenberg, noted engineer and builder of Duesenberg race and passenger cars, licked his field by two feet in a thrilling race for the junior title in the Amateur Bicycle League of America. Thomas Uberta was winner in the senior division. The winners will compete in the national championships at Newark, N. J., September 7 and 8.



Quiet-
SMOOTH
BRAKING
on Daytons

The large open spaces, and hollow spokes of the Dayton Dual Pneumatic radiate heat, keeping the hub, brake drum and tires always cool. Brake linings last longer and give quiet and more efficient service. Tires give their maximum mileage on Daytons.

Specify Dayton Dual Pneumatics and get all the Dayton superiorities of Efficient - Braking, Coolness, Time - saving Accessibility, Super - strength, Lightness and Attractive appearance.

Bus operators are sold on Dayton Dual Pneumatic Steel Wheels and look for them before they buy.

THE DAYTON STEEL FOUNDRY CO.
Dayton, Ohio

Dayton
DUAL PNEUMATIC
STEEL WHEELS

Drop in Car Output Is Seasonal, Says Ayres

(Continued from Page 1)

the decrease is continuing in August. This is not in the least astonishing, for some falling off in output always follows the spring peak of manufacturing activity, and this slow time usually gives way to a brief period of renewed activity in the early autumn.

"This year the slowing down is going to be considerable, and we know this not only by the reports from the manufacturers, but also by noting the changing figures from trades supplying materials for the automobile makers.

"One of the most reliable of the indicators foretelling coming changes in the volume of output of automobiles is to be found in the figures published by the Department of Commerce, and showing the changes in the orders received by makers of malleable castings.

"Such castings are used in considerable tonnages by makers of automobiles, and the orders for them must be increased or diminished well ahead of effective changes in the production schedules of the motor car manufacturers. This is still true even in these days of hand to mouth ordering.

"In the accompanying diagram, the solid black line shows the monthly changes in the output of passenger cars and trucks in this country during the past five years, if the average for that period is considered as being equal to 100.

"On that basis production has fallen as low as 37 in the winter of 1927 and has risen above 170 in April of this past spring. The dashed line represents in the same way the monthly fluctuations in the orders for malleable castings.

"It will be noted that it moves up and down in much the same way as does the line for automobile production, but always a little earlier.

"The degree of this tendency toward agreement between the two lines has been measured by the mathematical device known as the coefficient of correlation.

"If the agreement were perfect this co-efficient would be 1.00, but a computation shows that for the lines as they appear in the diagram it is only .71. If now the computation is carried through again so as to measure the tendency toward agreement that would exist if the automobile line were moved forward one month, it is found that the percentage of relationship is increased from .71 to .76.

"Moving the castings line ahead two months decreased the figure to .73 and, a shift of three months drops it to .60.

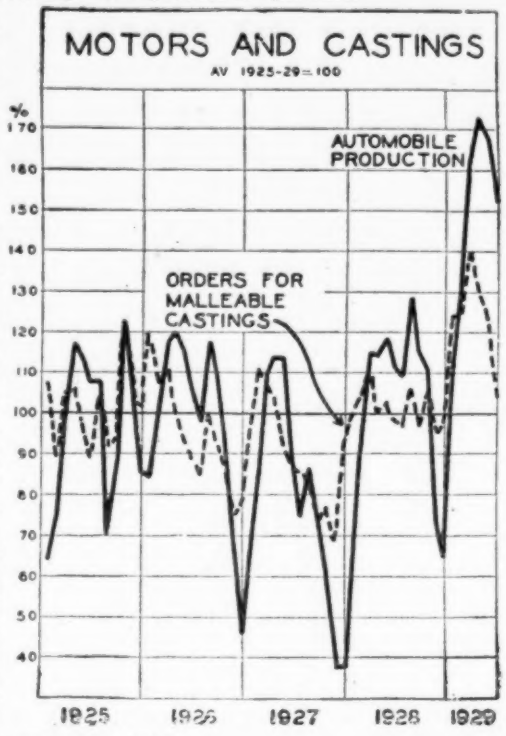
"The significance of all this is that the best general agreement between the two lines comes when the castings line is moved forward by one or two months, and this means that the changes in the orders for castings tend to foretell the course of automobile production by one or two months.

"The castings data now indicate that a truly important curtailment of automobile output is under way, and that it may be expected to reduce production figures for July and August to levels lower than any recorded since last winter."

Without comment, Col. Ayres calls attention to interesting rises in the market value of a number of industrial stocks, compared to the increases in their earning power.

"If a company is earning at the rate of $10 per share a year, and its shares are selling at $100, the stock is said to have a price earnings ratio of 10, because its price is ten times its annual share earnings," he pointed out.

Then he shows that the price earnings ratio of automobile accessory companies in the first quarter of this year was 12.4, compared to 7.0 in 1924; that of motor companies 14.5 this year, compared to 4.6 in 1924, and steels 14.2 this year, compared to 8.4 in 1924. The greatest relative advance was made by mail order house stocks, averaging about 285 per cent.



Cord Acquires 50% Of Columbia Axle Co.

(Continued from Page 1)

round out their organization. Auburn now has an engine building company, a body building concern, an airplane unit and the Columbia purchase provides it with a parts making factory.

E. L. Cord, president of Cord and Auburn, will be chairman of the Columbia board of directors, and L. B. Manning, R. S. Pruitt and Hayden Hodges, all members of the Cord Corporation board, will be directors of Columbia. E. H. Parkhurst, former vice-president and general manager of Columbia Axle, has been made president, and R. E. Fries and F. H. Ragan have been made vice-presidents and directors.

"The Columbia Axle Company," Mr. Parkhurst said, "gains $1,000,000 in working capital and receives the benefits of the management that has been responsible for the growth of the Auburn Automobile Company. The managing officers of the company will continue to actually direct the business."

Columbia is one of the oldest axle making companies in the industry, and numbers among its passenger car customers Auburn, Gardner, Kissel, Moon, Peerless and du Pont. It also supplies axles for about a dozen truck companies.

It was intimated here that the Cord Corporation probably would acquire a still larger interest in Columbia later.

Salt Lake City, Utah, Aug. 15—Randall-Dodd Auto Company, old-established Buick distributors and dealers of this city, have announced a number of important changes in their personnel, effective at once. Roy D. Shill, formerly sales manager and for some time past sales manager of the Howard Automobile Company of Oakland, Cal., has returned and been given the title of sales promotion manager; L. C. Dunn, cashier and director of service for the past two years has been appointed superintendent in charge of the service shop and parts department; Ralph Ruegg, a former employee, has returned as retail used car manager. G. Wayne Clark has been promoted to the position of advertising manager.

GOODRICH SILVER FLEET ARRIVES AT TOLEDO, O.

Toledo, O., Aug. 15.—Proceeding westward the Goodrich Silver Fleet dropped anchor in Toledo today. A new national safety movement is being created based on experience and observations made during a nationwide survey of traffic conditions encountered by the Silver Fleet on its spectacular tour of the country. Details of the project are being presented to civic organizations throughout the country, and they are all lending their support to the promotion of the plan.

SPARKS *from* DETROIT

Roy Peed Is Happy

* * *

Airplane Smokers

* * *

Word from Berlin

Fred Kingsbury—Detroit Editor

L. G. (ROY) PEED, sales manager of the De Soto division of the Chrysler Corporation, is a happy man. This is due to the latest report from that organization to the effect that in its first year in business De Soto recorded 81,065 sales. This is said to be a record for first-year cars, and speaks well, not only for the product but the executive personnel of the organization.

* * *

A GREAT deal has been said recently about the motorist who drives along the highway and throws out a lighted cigarette or cigar. It is claimed that many fires have been started in this manner.

Comes word now that the airplane smoker is classed as a menace by the United States Forest Service. It is reported that a forest patrol plane recently made a test and discovered that a large percentage of smokes dropped from altitudes up to 1,000 feet are still burning after they reach the ground.

It would seem that with the many ash trays especially designed for use in automobiles, and undoubtedly there are also some for airplanes, it would not be necessary to throw lighted cigarettes or cigars from the vehicles.

* * *

The Jefferson plant of the Chrysler Corporation has a new dress. The exterior of the factory was recently decorated, and it has a most imposing appearance to those driving past.

* * *

WORD has just been received from several Detroit men who are in Berlin attending the sessions of the International Advertising Clubs that the sessions have been very interesting and much good has resulted.

A large number of advertising and business men from this city are in Berlin at the present time and it is expected that several of them will tour the Continent before their return to the United States.

* * *

N. J. O. Strider, general manager for the Cadillac distributor in Syracuse, N. Y., dropped into the Detroit office of The Automotive Daily News the other day. Mr. Strider says he does not get to Detroit frequently, but, when he does, it is an inspiration to see how fast the city moves forward in every way.

* * *

It is seldom one sees the General Motors Building decorated. At the present time the Cass Avenue, Grand Boulevard and 2d Avenue entrances are dressed in red, white and blue. Reason—Chevrolet convention.

* * *

IF Edsel and Henry Ford have a hobby, it is probably the Lincoln plant and the Lincoln car. The plant located at Livernois and Warren Avenues is one of the finest looking and best equipped automobile manufacturing establishments in the country. It is one of the cleanest, both exterior and interior.

Any announcements regarding the Lincoln product are usually made by Edsel Ford.

* * *

Wilbur B. Huston, "the Edison boy," is spending a few days in Detroit, where he is visiting relatives and inspecting the automobile manufacturing plants.

* * *

The anti-parking campaign instigated by Inspector Edward A. Mitte, traffic director in Detroit, netted 593 automobiles the first day of the campaign. All of the cars are being towed to "pounds" located at strategic points throughout the city. It costs the owner $3 to reclaim his car.

* * *

Frank Byerley, pilot for the Schlee-Brock Aircraft Corporation, does not like pigeons. Several collisions have resulted between airplanes and pigeons, due to the fact that pigeons insist on feeding in the middle of the temporary runways where the planes take off and land at the City Airport. Byerley has appealed to airport officials for a remedy.

* * *

Many workers in Detroit live in Canada. This is a condition that has existed for a long period. Now the Board of Education has taken exception to employees of the board who live in Canada and it appears likely that school workers of Detroit who live across the border will be asked to move to the city or quit.

Truck Sales in New Jersey Gain in All Counties

52.5% INCREASE FOR SIX MONTHS

Essex County Leads in Total Registrations; Hudson Second

TRENTON, N. J., Aug. 15.—For the sixth consecutive month New Jersey's truck sales, based on official registration, have shown increases over the same periods of 1928, with every one of the twenty-one counties in the state showing gains. For the first half of the present year registrations gained 52.5 per cent. over the 1928 half year.

The total truck sales so far this year were 9,357, as against 6,136 in the same period last year. Essex county led with a registration of 2,001, an increase of 46.1 per cent., while Hudson county was second with 889, a gain of 54.3 per cent. over the first six months of 1928. Bergen county, a residential section, was third, while Passaic county, a manufacturing center, was fourth.

The county recording the greatest gain was Burlington, with a 128.2 per cent. increase for the half year, while the lowest gain was made by Cumberland with 27.3 per cent.

An unusual feature in New Jersey truck registrations in the past decade has been the steady growth year by year. Unlike some states, truck sales in this commonwealth have been consistent. In the past ten years New Jersey has been undergoing a steady program of construction work, which accounts a great deal in the increased use of trucks.

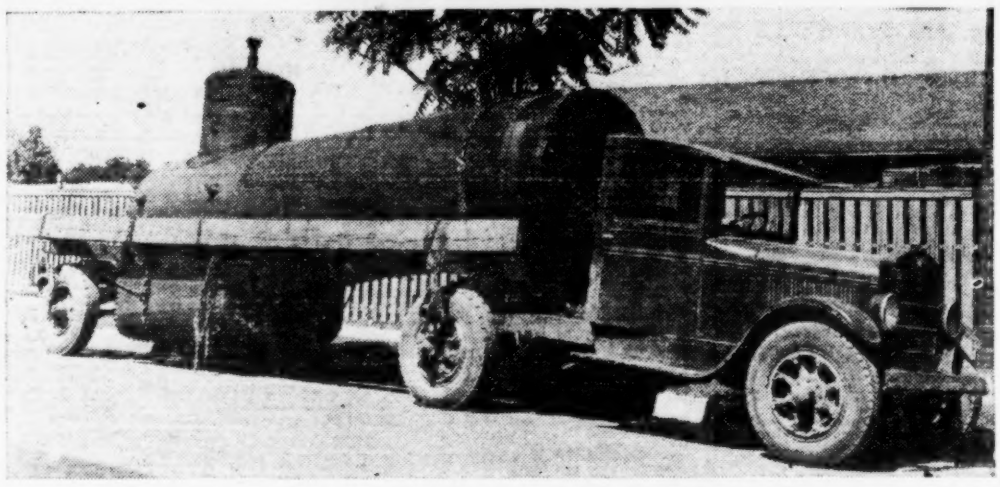
Railroads have been building larger freight and passenger terminals, airport construction has taken a great spurt, while new bridges, the Holland vehicular tunnel and huge residential developments that have resulted since the building of the tunnel have all played their individual parts in the increased use of trucks.

The light commercial car has also had a big share in the New Jersey prosperity, for suburban sections have grown so rapidly that the big stores in the nearby cities have had to purchase extra equipment to make deliveries.

Following are the truck registrations by counties for the first six months of 1929, compared with the same period in 1928, showing unit and percentage gains:—

	1929	1928	Unit Gain	P. C. Gain
Atlantic	377	229	148	64.6
Bergen	803	503	300	59.6
Burlington	210	92	118	128.2
Camden	376	245	131	53.4
Cape May	131	67	64	95.5
Cumberland	247	194	53	27.3
Essex	2,001	1,372	629	46.1
Gloucester	219	107	108	100.9
Hudson	889	576	313	54.3
Huntingdon	99	64	35	54.6
Mercer	429	290	139	47.9
Middlesex	472	311	161	51.7
Monmouth	658	478	180	37.7
Morris	300	231	69	29.9
Ocean	131	98	33	33.7
Passaic	797	551	240	43.6
Salem	144	73	71	97.2
Somerset	196	107	89	83.1
Sussex	121	91	30	32.5
Union	614	382	232	60.7
Warren	143	75	68	90.7
Totals	9,357	6,136	3,221	52.5

Reo Truck on the Job in Texas



THE REO TRUCK pictured above is the property of R. M. Ballew and Son of Gainesville, Tex. It is a three-ton tractor model and is hauling a seventy-five horse power boiler, weighing 19,000 pounds. The unique loading arrangement greatly facilitates haulage. Recently the truck was called up to move a ninety horse power boiler, weighing 23,000 pounds, for a distance of 382 miles. This trip was negotiated at an average speed of twenty-five miles an hour.

DEALER DOINGS

Nashville, Tenn., Aug. 15.—The Auburn Nashville Company, recently appointed to handle the Auburn in Nashville, opened its doors to the public Monday, August 12, at 2110 West End Ave. Everett Gourley is sales manager. W. B. Cook is vice-president and general manager.

Hackensack, N. J., Aug. 15.—Hackensack's new automobile row, which will house three car dealers and an automobile body repair plant, is rapidly nearing completion, with indications that it will be ready for occupancy on September 1. The building, at 96 to 104 Dirst St., will contain Conrad & Duthie, Inc., Chrysler and Plymouth dealer; F. A. E. Thorling, Inc., Nash dealer, and the Hackensack Body Company.

Sharon, Pa., Aug. 15.—The Alward-Hunter Company, Chrysler distributor, has announced a change in its name and policy, effective immediately. The concern will hereafter be known as the Shenango Valley Auto Company and will act in the capacity of direct dealer for Chrysler cars, relinquishing its distributorship. C. A. Alward and L. W. Hunter will continue as heads of the concern.

Buffalo, Aug. 15.—Robert T. Searle, formerly treasurer of the T. E. Adams Company, has been awarded a dealership for Buick and Marquette cars in Randolph, N. Y., and will open a sales and service establishment there shortly, also carrying a line of accessories.

Richmond, Ky., Aug. 15.—The Turley Motor Company of this city, dealers for the Buick and Marquette automobile, formerly operated under the name of the Richmond Buick Company, which was bought last week by the Turley Company. R. E. Venerable will have charge of the repair department. The company will operate an all day and night garage and service station.

Glasgow, Ky., Aug. 15.—Bob Ewing of this city has purchased the interest of John Neely in the Neely-Ewing Motor Company, Ford dealer of this city, and the family of Neely will return to Owensboro, Ky., where it is likely that he will engage in the automobile business. There will be little change made in the policy of the business.

Pikeville, Ky., Aug. 15.—Rogers Brothers Motor Company of this city have completed their new garage, one of the most complete and modern in Eastern Kentucky. The company has the dealership for the Chevrolet cars, Goodrich tires, and Exide batteries.

Seattle, Wash., Aug. 15.—Forging another link in the chain of dealerships being established throughout Washington and Alaska by the Allen Motor Company, Hudson-Essex distributors, the Olympia, Wash., dealership was opened last week at 600 4th Ave., Olympia. Jack Gavin is manager of the new store.

Personal Briefs

Hollywood, Cal., Aug. 15.—Charles Schonlaw, for the past seven years sales manager for Winslow Felix, Chevrolet dealer, Los Angeles, has purchased the Chevrolet dealership of Walter Hodge, Santa Monica Boulevard. New equipment is being installed in the service department.

New Orleans, Aug. 15.—G. F. Spence, formerly wholesale manager for Gus D. Ravol when the latter was Cadillac distributor here, was a visitor in New Orleans during the past week and attended a luncheon of the Automotive Trades Association. Mr. Spence is now connected with Don Lee, Cadillac and La Salle distributor for southern California.

Seattle, Wash., Aug. 15.—C. H. Wismolek, widely known automobile man of the Northwest, has just been appointed manager of a new Plymouth dealership in Seattle, at 1100 East Pike St.

Memphis, Tenn., Aug. 15.—Harter B. Hull, formerly Dodge dealer in Memphis and still associated with the Kennady-Hull Company, 1011 Union Ave., but in recent years located at Baltimore, Md., as Dodge distributor, was a visitor back home this week. Mr. Hull recently was elected vice-president of the Automobile Dealers' Association. He is making a tour of the South and was the guest while here of Henry Kennady.

Klamath Falls, Ore., Aug. 15.—Paul Schnur has accepted a position as sales manager for the Oldsmobile at 136 Main St. The dealership recently moved its quarters from 131 South 4th St.

OMAHA TRUCKING FIRM GETS LARGE TRACTOR-TRAILER

Omaha, Neb., Aug. 15.—The Red Ball Transfer Company of this city has purchased what it claims is the biggest tractor and semi-trailer west of Chicago. The new machine will be used as a part of the company's trucking fleet, according to M. L. McKeon, manager. The trailer has three sets of axles, which are equipped with ten tires. It will be used principally in local and Omaha to Lincoln hauling.

Indianapolis, Ind., Aug. 15.—Walter Bieling, Stutz sales manager for the central territory for the last four years, has been appointed district sales manager for the Far Western territory. Bieling's district extends from Canada to Mexico and includes all states west of the Rockies.

NEW ORLEANS DEALERS MAY CLOSE SUNDAYS

New Orleans, La., Aug. 15.—A "gentlemen's agreement" among automobile dealers of the city is expected to bring about closing of all new and used car salesrooms on Sunday as a result of action taken by the Automotive Trades Association last week. At the regular luncheon of the dealers' organization held Wednesday, the proposal to ask the Commission Council to adopt an ordinance for compulsory Sunday closing was disapproved, and an agreement among dealers is being sought by J. M. Nettles and a committee working with him.

P. H. MALLORY VISITS SEATTLE MORELAND HEAD

Seattle, Wash., Aug. 15.—P. H. Mallory, general sales manager of the Moreland Truck Company, is in the city from Burbank, Cal., helping the local manager, Jack Lane, get established in the new home of this concern, for the Seattle branch. The new structure covers 32,000 feet of floor space, and is now virtually completed. Location is on Seattle Boulevard at Norman Street.

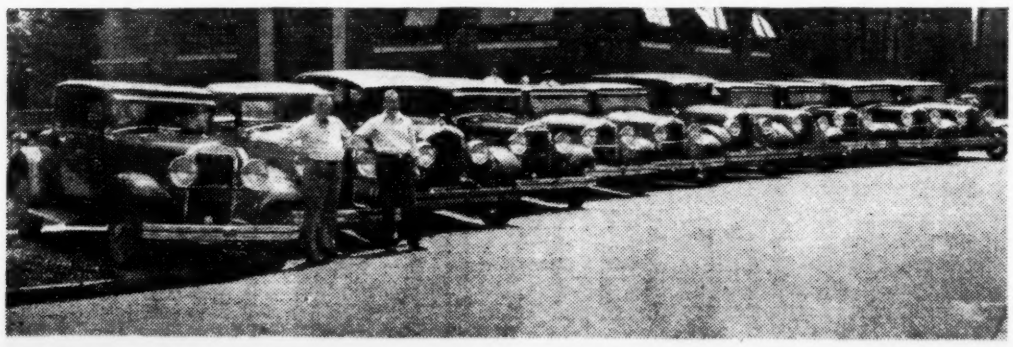
N. Y. CAR MERCHANTS TO PLAY GOLF AUGUST 20

New York, Aug. 15.—Preparations for the fifth monthly golf tournament of the Automobile Merchants Association of New York, Inc., to be held on August 20, at the famous and exclusive Westchester Country Club, Rye, N. Y., have been completed. At the association's tournament at the Winged Foot Golf Club last month 160 were in attendance.

Chicago, Aug. 15.—Equaling the time of the fastest express train between Chicago and Dallas, Tex., a 4-Forward Speed Durant last week carried L. L. Graham, well-known inventor, over the long run through the heart of the country in road tests for a radio set he has devised for automobiles.

Graham stopped only for fuel and meals en route. The actual running time was 27 hours and 15 minutes.

Paint Men Prefer Marmon Cars



THE ABOVE FLEET, two Roosevelts, Marmon built, and nine Marmon cars give evidence of the preference of the executive personnel of the Advance Paint Company of Indianapolis. The fleet is in constant use, not only to transport officials on their daily routine, but also for pleasure.

2 Series of fine cars

The new Willys-Knight Great Six is distinctively different from other fine cars, with an individuality which reveals itself in a higher order of beauty, luxury and performance.

Yet with all its many improvements, both artistic and mechanical, the new Great Six is priced so reasonably as to make it the leading value among modern fine cars.

Dealers now enjoy the advantages of selling Willys-Knight's custom beauty and sleeve-valve power in two series of distinguished cars—the "70-B" and the GreatSix, priced from $1045 to $1895.

WILLYS-OVERLAND, INC., TOLEDO, OHIO

WILLYS-OVERLAND SALES CO., LTD., TORONTO, CAN.

NEW STYLE

WILLYS-KNIGHT

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
350 Hudson St., New York, N. Y.
D. J. Eider, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary

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Circulation—Net paid Average over 10,000 daily guaranteed. Member A. B. C.

FRIDAY, AUGUST 16, 1929

ADVERTISING AND BUSINESS HEADQUARTERS

2716 Graybar Bldg., New York, N. Y. Telephone LEX ington 6388
Harry A. Tarantous, Business Manager. J. Edward Schipper, Eastern Manager. George M. Slocum, Manager Detroit Bureau, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500; Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill., phone Central 5936; Metz B. Hayes, New England Manager, Little Building, Boston, Mass.; Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash.; Philadelphia Office, 15th and Cherry Streets. **Address ALL advertising and business correspondence to 2716 Graybar Building, New York City.**

EDITORIAL DEPARTMENT

350 Hudson St., New York, N. Y. Telephone CAN al 1000
Alexander Johnston, Editor. L. E. Levick, News Editor.
Detroit Bureau—Fred Kingsbury, Editor, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500. Contributing Editor, John C. Wetmore.

Mail subscriptions to **CIRCULATION DEPARTMENT**—C. H. Wilson, Manager.
1926 Broadway, New York, N. Y. Telephone TRA falgar 4500
Subscription Rates—One year, $12.00, two years, $20.00, for United States and Canada. To Foreign Countries—One year, $15.00; two years, $26.00. Single copies, 10 cents.

Izett

IT happens that the word at the head of this paragraph is not a dialectician's way of asking a question. As a matter of fact the word is a coined name for a new alloy steel that is of great interest to the automotive industry.

This alloy steel which has been given the jocular name was developed by the famous Krupp works in Germany. It is claimed that this alloy does not become brittle when it is worked cold. Furthermore Izett steel does not have the ordinary tendency to developing cracks around rivet holes and rivet heads. It retains its tensile strength in use over longer periods than we have been accustomed to expect steel to do. Izett alloy was used in the construction of the boilers of the Bremen and engineers watched the recent record-breaking voyage with more than passing interest. It was Izett's first public trial.

The value of an alloy possessing the qualities that are claimed for Izett to the automotive industry is obvious. Arrangements have been completed for the manufacture of this new steel in this country and engineers will undoubtedly watch its performance with keen interest, because possession of such an alloy will permit them to carry out many ideas that they have long wanted to try.

Fours, Sixes and Eights

WHEN the final roll for 1929 is called we shall probably find some interesting developments in the standing of the various forms of power plants used in our American motor vehicles. For the first time in history the six-cylinder engine will probably go into the lead on the basis of the number of vehicle units employing it.

For some years the six has been in the lead as regards the number of chassis employing it, but the huge production of Ford and Chevrolet has lifted the four into first place as regards actual number of units turned out. The shift of Chevrolet from a four to a six-cylinder power plant upset the traditional balance. During the first six months of the year there were turned out approximately 1,900,000 sixes against 1,250,000 fours. There is no reason to believe that this ratio will be greatly changed by the production records of the final half of the year.

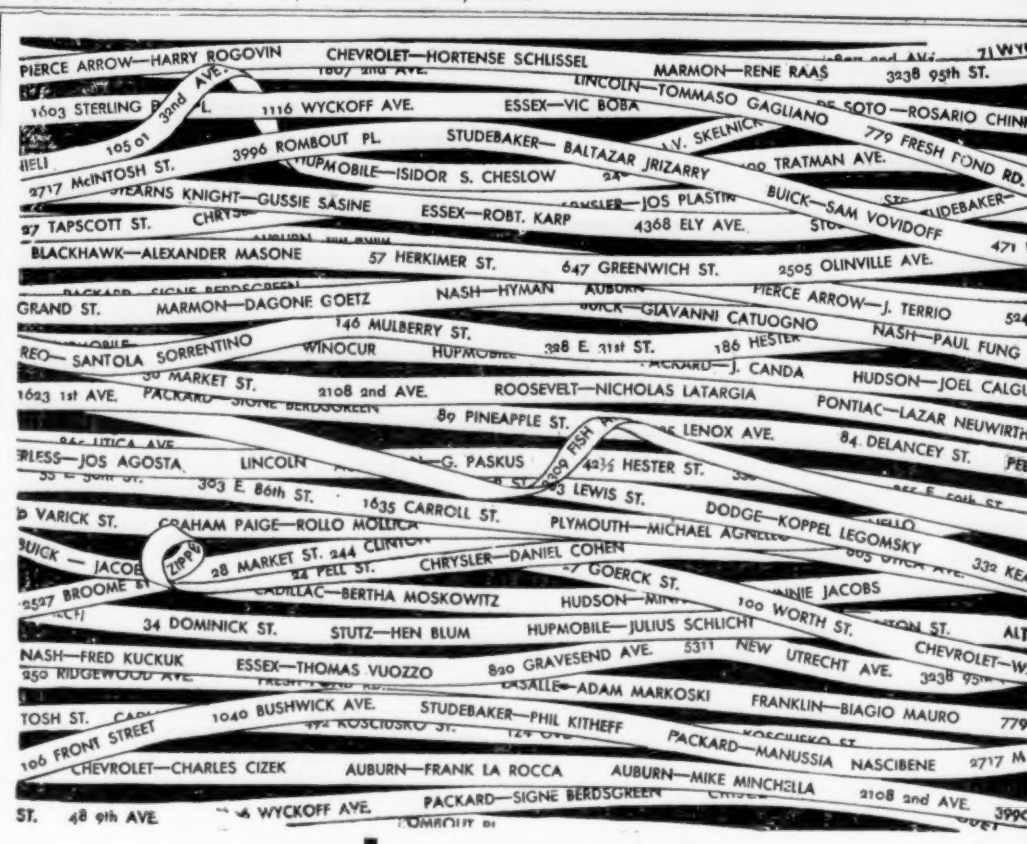
In the meantime, the 1929 figures will probably show a substantial gain for eight-cylinder power plants. Exactly what the final standing of the eights will be it is impossible to estimate. In the final summing up for the year we shall probably find the six-cylinder total will be in the neighborhood of 3,000,000 vehicle units, with the fours accounting for somewhere between 2,000,000 and 2,500,000 chassis. The eights will take up the slack to give us the record production of all time.

Dogs and Oil

AT last the proletarian hot dog has achieved social recognition. Big business has called upon the roll and frankfurter family, so to speak, and placed it in the commercial social register.

The Beacon Oil Company, which is a scion of no less a commercial personage than the Standard Oil Company of New Jersey, has contracted with a big food products organization to establish refreshment stands at its service stations.

One feature of this move will rejoice every lover of rural beauty. The Beacon organization has devoted a great deal of attention to making its stations not only efficient but attractive. The hot dog business in connection with these service stations will also be beautified. The preservation of rural beauty will be greatly aided by the passing of the hot dog into the hands of big business.



LOOKIT the ears on 'em!

AND LOOK at their names and addresses!

Take any of the weekly lists that Mr. Sherlock so kindly compiles, and check the new car registrations in New York City and suburbs.

Is it a Social Register—or a Sweeney roll call?

So many of the names are foreign—and funny!

And so many of the addresses are anything but ultra!

But they buy cars—new cars!

And they are the folks you have to sell!

So why snipe around and spend a lot of effort and money trying to reach some blue book maybe buyers?

Only 22.1% of new car sales were to families in the $5000-and-better income districts—and The News reaches more of these than any other paper! Over 50% were sold in the $2000-$4000 districts.

And why keep your advertising an expensive secret in big and bulky newspapers that nobody has time to read except a man out of work?

When you can use The News—

Which reaches almost everybody worth reaching.

The largest circulations, daily and Sunday, cover the market.

And the small page paper covers the reader.

And the cost fits the confines of the budget!

The News can do a better job for you in New York!

THE NEWS

NEW YORK'S PICTURE NEWSPAPER

Tribune Tower, Chicago - Kohl Bldg., San Francisco - 25 PARK PLACE, NEW YORK

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

WHOLESALE

MERCHANDISING
ACCESSORIES
EQUIPMENT

COMPLETE STOCKS INCREASED BUSINESS OF SANTA ANA FIRM

STARTING from "scratch," as you might say, a few years ago, Hockaday & Harlow, Santa Ana, Cal., have achieved a splendid success, until now they have three times the original floor space in their first establishment and branches at Fullerton, Anaheim and Oceanside. And when you ask members of the firm as to the main reasons for their success they reply that it is due to having a complete stock at all times, thus being fully equipped to give real service to all of their patrons.

That is the sort of thing that the wholesale automotive concern's customers appreciate—the ability to get everything needed at the one place, instead of having to shop around for it. One single statement to a customer to the effect that the concern doesn't carry a desired item or is just out of it may give the establishment a permanent black eye with that patron, and so work real disaster in the way of building more business.

Another factor in the success of this concern is its policy of never over-reaching itself. In other words, the concern starts up its branches modestly without tacking a great deal of overhead on them and then, as business increases, additional space is secured. This policy, of course, cuts down the waiting period until the branches are on their feet and makes their success more certain and substantial. And, in following out this policy, all available space is made use of by careful arrangement of stock, offices, etc., so that surprisingly large quantities of goods are carried in comparatively small space, as these pictures indicate.

This company places great faith in the ability of merchandise to sell itself, and so everything that can possibly be placed before customers' eyes is out on display.

As shown in these pictures, gaskets adorn the walls so the customer can see that the company keeps a large stock. Even if he is not at the moment in the market for gaskets there is little doubt that when he does want them his mind will revert to this display and will hold the thought that there seemed to be millions of them at Hockaday & Harlow's.

Fan belts hang up where they can be easily reached—and seen. Besides the regular display board, supplied by the manufacturer, these belts are also hung along the moldings above the gaskets.

The firm handles shop equipment, and that stands out in front of the counter, where it can the more readily be inspected. Small tools, mounted on display boards, are mingled with the various pieces of equipment, because this firm has discovered that quite often a man will inspect an expensive piece of equipment which he is not quite ready to buy and stand toying with one or another small tool while he thinks it over. Seldom does he leave the store without buying one of these tools in such a case.

Storage bins run at right angles from the counter and small electrical parts, manifold gaskets, felt washers and the like are displayed on the ends of these bins facing the customer.

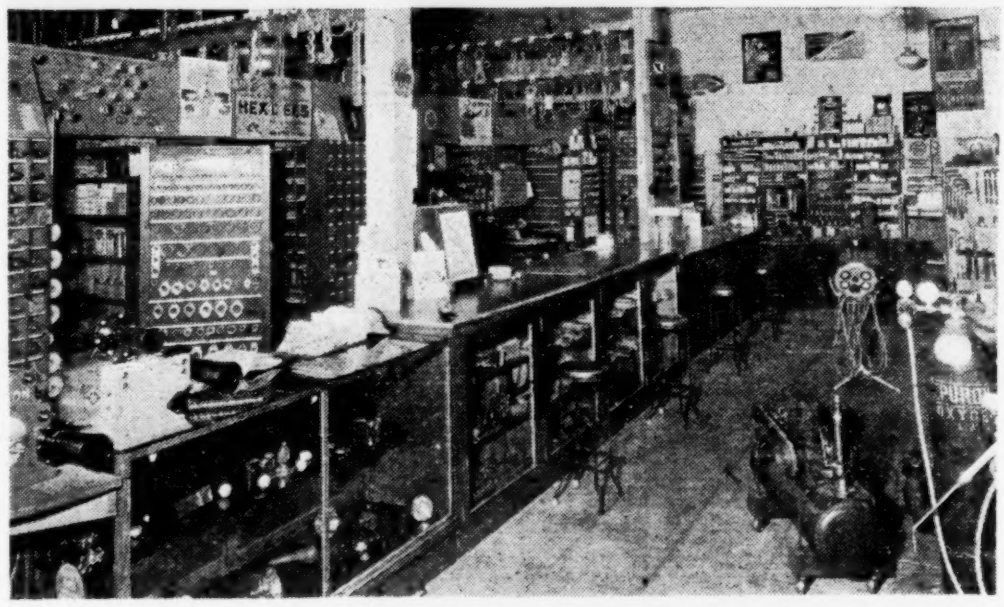
The counter is made up of a number of showcases in which accessories and high-grade steel tools are displayed under the glass.

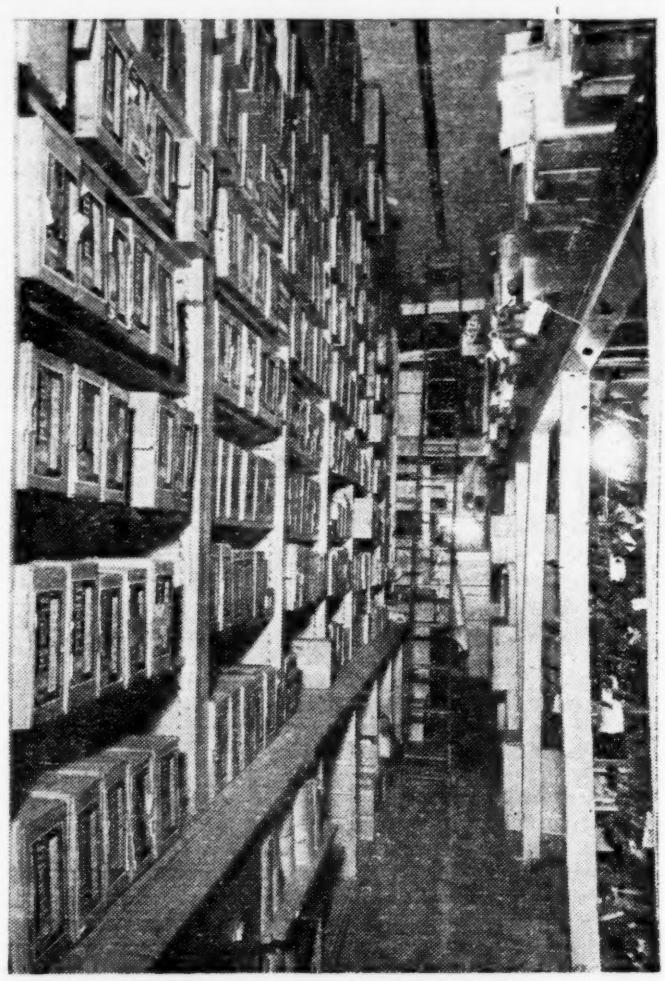
The storage bins behind the counter run right up to the ceiling in order to save space and a movable ladder is hung from a center ceiling rail so the counter men can reach both bins facing the aisle from the one ladder.

Practically all of the bins used in the main store, as well as the branches, are of steel. The counter's, too, are standard steel equipment which looks well, is practically indestructible and comparatively inexpensive.

Hockaday & Harlow early adopted the idea of the one-stop station, inasmuch as they believed in carrying a one-stop stock and displaying it in a manner that encourages their customers to buy.

Jobber Has Neat Store, Stockroom Layout





COUNTER of Hochaday and Harlow, Santa Ana, Cal., is made up of a number of show cases in which accessories and high grade steel tools are displayed under the glass. The other picture shows the stockroom with storage bins running up to the ceiling.

Wholesale Brevities

Jamestown, N. Y., Aug. 15.—The Julian Pump Manufacturing Company, manufacturer of gasoline and oil measuring devices, reports that incoming business and inquiries will warrant production of near capacity for several months to come. This concern has been manufacturing gasoline pumps for filling stations of the pressure type and lately has been shipping a considerable number of them to Pacific Coast points.

Milwaukee, Wis., Aug. 15.—The Briggs & Stratton Corporation is enjoying a good business, according to Otto Sickert, sales manager. Sales compare very favorably with the same period last year, especially in the automotive hardware division. The company makes locks for a large number of automobile manufacturers.

Franklin, Pa., Aug. 15.—The plant of the Chicago Pneumatic Tool Company is working at about 75 per cent. of capacity, with night shifts in evidence in certain departments. The demand for pneumatic tools and equipment is gradually increasing.

Milwaukee, Wis., Aug. 15.—The Hydraulic Jack Corporation, which has been manufacturing a hydraulic jack for automobiles and trucks, has shown steadily increasing sales. The company, whose jack has been manufactured for almost a year, produces a double ram, automatic release product. J. M. Mollerus is sales manager of the Hydraulic Corporation.

Trenton, N. J., Aug. 15.—The Ufert Auto Parts Company, Inc., has added New Departure and Hyatt bearings and Frederick's armature line. An additional 1200 square feet of floor space has been taken by the concern.

Greenfield, Mass., Aug. 15.—The Greenfield Tap & Die Corporation announces the appointment of Harry Soper, formerly vice-president of Celluloid Corporation, Newark, N. J., as vice-president.

Amarillo, Tex., Aug. 15.—T. C. Connally is now covering the city territory for the Westmoreland Company. Les Behringer, former counter man in the Amarillo store, has taken over Connally's old territory.

Louisville, Ky., Aug. 15.—Peaslee-Gaulbert Corporation is moving its automotive office in the Columbia Building with the rest of its general offices.

EXPECT GAIN IN A. O. SMITH FISCAL YEAR NET INCOME

Milwaukee, Wis., Aug. 15.—A large increase in the net income of the A. O. Smith Corporation for its fiscal year, which ended July 31, is anticipated. During the past year A. O. Smith for the first time has begun to apply its patented electric welding process to mass production, with the result that earnings are expected to show a marked gain. The automobile frame division of the company is turning out approximately 10,000 frames in twenty-four hours with only 200 men. Besides the frames used by Ford, the company makes a large percentage of all frames taken by the automobile industry.

SALISBURY AXLE BUSY ON BIG CITROEN ORDER

Jamesown, N. Y., Aug. 15.—The Salisbury Axle Company, a unit of the Spicer Manufacturing Company, in some departments is working thirteen hours a day. This concern recently obtained a large order for axles from the Citroen Company of France and its contract department is at work on specifications for a new low-priced car to be distributed through a prominent mail order concern. Working schedules are expected to be increased very shortly, according to report.

TRIANGLE PARTS TAKES ON ACCURALITE LINE

Seattle, Wash., Aug. 15. — Announcement is made by Wallace Cathcart and Louis Vigelius of the Triangle Automotive Parts Company, 918 East Pike St., this city, that its firm has been appointed distributor in western and central Washington for Accuralite pistons, piston pins and cylinder sleeves.

The line includes Accuralite cast iron pistons, lynite pistons, Accuralite Nelson invar-strut pistons, lapped piston pins and cylinder sleeves, all made by the Accuralite Company of Muskegon, Mich.

Portland, Ore., Aug. 15.—Braun Machine Works has added another piston finishing machine. Mr. Lancaster is now associated with Curt Braun.

Editor's Column

NO jobber's advertising is so good that it cannot be made better. No advertising is so profitable that it would not be more profitable if it were improved in every possible way.

How shall a wholesaler improve his advertising?

First, let him see whether he is using the most suitable type, considering the location in the newspaper, the types used by adjoining advertisers. Unless his advertisement stands out and is as legible as it can be made, it is not doing all it might for him.

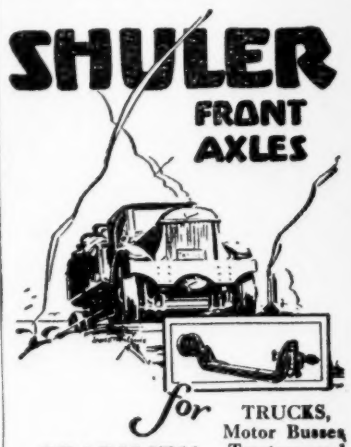
Then let him consider the amount of white space he uses in the advertisement in order to produce contrasts. If the advertisements around his are full of type, leaving almost no white margin, he will have to leave more white space around his own type if it is to stand out. White space is important when it is needed to get the attention of readers.

He should make it a point to feature in one advertisement only as many items of stock as can be really featured. If too many things are mentioned, none of them will be features. The advertisement will descend to the level of a commonplace price list or catalog page.

If price is the reason people are going to buy from that advertisement, price is the thing that is to be emphasized, but price seldom makes people want merchandise. It may lead them to buy it after they have already decided they want it, but it does not develop new users. It merely helps to bring in users who have been buying elsewhere. Price advertising has its place but it is not constructive advertising. It is most effective when it offers various levels of quality from which the buyer may choose.

Better advertising involves more care in preparing copy, after using more care in choosing the medium and the position in that medium. It involves more care in choosing what to advertise, what to say about it, how to display the printed words.

Norton, Kan., Aug. 15.—A complete all-service garage to be known as Lee Motor Service, has just been organized by A. R. Lee. The shop is completely equipped and includes a Storm machine as well as a new Van Norman piston grinder. A complete stock of parts will be carried.



for TRUCKS, Motor Busses, Tractors and Trailers

STABILITY
"Strength to stand or endure"

Close application to the principle of not spreading our activities too thin, but with our face ever to the future, has given us strength to endure making Shuler a "buy word" in the Front Axle field.

FRONT AXLES ONLY

SHULER AXLE CO.
INCORPORATED
LOUISVILLE KENTUCKY
MEMBER OF MOTOR TRUCK INDUSTRIES, INC. OF AMERICA

Chevrolet Sales in Fall Put at 300,000

(Continued from Page 1)

the audience certain of the company's fall sales plans, were enacted.

The meeting opened with a talk by W. G. Lewellen, the company's sales promotion manager, who reviewed the salient mechanical features of the six-cylinder car, which was sold to more than a million owners in less than eight months of the present year.

He was followed by the first of the playlets, with N. H. Pearson, regional sales promotion manager of the mid-eastern region, and A. H. Rutledge, regional sales promotion manager of the St. Louis region, in the leading roles.

This is followed by "Getting It Done," another playlet, with T. O. McLaughlin, city sales manager at Columbus, O., and C. P. Fiskin, zone sales manager at Indianapolis, as principals.

M. D. Douglas, assistant general sales manager, then discussed "Associate Dealers." He was followed by D. E. Ralston, also assistant general sales manager, who talked on "Don't Guess—Know the Answer."

The afternoon's first speaker was D. S. Wallace, manager of Chevrolet's Detroit retail store, who took up the problem of the used car. J. P. Little, Chevrolet's parts and service manager, discussed the service problem. R. K. White, general chairman of the convention, was the afternoon's last speaker.

At the evening banquet W. S. Knudsen, president of the Chevrolet Company, was the only speaker. He was followed at 8 o'clock by a national broadcast by the banquet entertainers.

Friday the convention will be wound up with a lake ride on the steamer Tashmoo.

FEDERAL SCREW WORKS SHOWS GAIN IN PROFIT

Detroit, Aug. 15.—Federal Screw Works reports for six months ended June 30, 1929, net profit of $540,515 after depreciation and Federal taxes, equivalent to $3.77 a share earned on 143,500 no-par shares of stock. This compares with $194,688, or $1.85 a share, on 105,000 shares outstanding during the first six months of 1928.

RICHFIELD OIL CO. BUYS CONTROL OF UNIVERSAL

New York, Aug. 15.—The Richfield Oil Company and a group of Los Angeles and San Francisco capitalists have purchased a controlling interest in the Universal Consolidated Oil Company from the Crocker interests of San Francisco, an announcement yesterday said.

Roy N. Bishop, president of Universal and an associate of the Crockers, is to resign, and his place is to be taken by James A. Talbot of the Richfield Oil Company.

COMMERCIAL ALCOHOL NET FOR QUARTER $228,968

New York, Aug. 15.—For the quarter ended on June 30, the American Commercial Alcohol Corporation and subsidiaries report consolidated net earnings of $228,968 after all charges including preferred dividends, equal to 76 cents a share on the 300,229 shares of common stock outstanding, compared with $123,009 available for the common stock from April 25, 1928, when the company was organized, to June 30, 1928. For the six months ended on June 30 net earnings were $493,083, equal to $1.64 a share of common stock.

Hollywood, Cal., Aug. 15.—Roy N. White has been appointed Hollywood Whippet dealer, and has opened a sales and service headquarters at 5910 Sunset Blvd.

FORD OF GERMANY STOCK GOES ON BERLIN BOERSE

Berlin, Aug. 15.—The Boerse today announced that 6,000,000 marks of shares of the 15,000,000 marks share capital of the Ford Motor Company, Ltd., of Berlin had been admitted to trading.

The exact date from which the shares will be negotiable on the Boerse will be decided in the next few days.

OMNIBUS DIRECTORS DELAY MEETING UNTIL AUGUST 27

Chicago, Aug. 15. — Directors' meetings of the Omnibus Corporation, New York Transportation Company and Fifth Avenue Bus Securities, scheduled for yesterday, have been postponed until August 27 due to lack of quorum.

First Revision, July, 1929, New Commercial Car Registrations

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies.

Commercial Car Registrations do not include buses.

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Fargo	Federal	Ford	G. M. C.	International	Mack	Pierce-Arrow	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys-Knight	Miscellaneous	Totals	States
Illinois	12	14	791	88	159	27	12	1149	49	195	31	1	2	46	1		10	3		51	23		123	2787	Ill.
Dist. of Col.	1	2	35	5	2			137	6	4	1			4				2		3	14		3	219	D. C.
Total	13	16	826	93	161	27	12	1286	55	199	32	1	2	50	1		10	5		54	37		126	3006	Total

Final Revision, Complete June, 1929, New Commercial Car Registrations

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies.

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Alabama		2	174		7	4		221	8	32	5			3				1		2	1			460	Ala.
Arizona			89		25	1		121	17	7				5		6			5	1	1	1		279	Ariz.
Arkansas		1	132		8			140	4	27	3									4	4		1	324	Ark
California	25		437		176	7	22	1198	99	56	41	3		92	3	17	23	7	14	2	37	1	139	2399	Calif.
Colorado		1	188		27	5	2	225	24	30				10		1			1	6	6		3	529	Col.
Conn.	12	11	220	13	72	9	6	281	42	41	38	3	2	61			6	17	6	8	4	2	16	870	Conn.
Delaware	3		46		3	1	1	80	9	6				3		1	1	1	1					156	Del.
Florida		5	117	1	15	1		285	10	17	9			4	2					2	10			478	Fla.
Georgia	1	4	245		20	1	3	294	3	18	6			5					2	6	2	1		611	Ga.
Idaho			135		19	1		134	9	23	4			9		1			3	2	5	1	1	347	Idaho
Illinois	5	10	445	66	92	11	3	783	32	115	36	1	1	34			4	1		18	17		65	1739	Ill.
Indiana		9	301	5	52	2		499	48	52	6	2	3	20		2		11	9	11	10	1	2	1045	Ind.
Iowa		4	451	2	48	7	2	380	8	127	3		1	27		5			1	24	3	1	8	1102	Iowa
Kansas		2	198	2	35	1	2	227	16	53	2		1	8	1	1		1	7	4	3	1	1	566	Kan.
Kentucky		1	176		25	2	2	212	9	43	10			9				3	1	5	5	1	9	513	Ky.
Louisiana			181		20	1		336	12	60	1			3		1			1		5			621	La.
Maine	1	4	237	2	47	5	1	239	9	12	6			29		4	2		2	5	2	2	5	614	Maine
Maryland	8	10	155	7	48	3	5	267	9	52	21		1	23	2	1	6	1		1	15		18	653	Md.
Mass'setts		24	334	17	145	16	24	692	83	75	51	4	1	74	1		29	3	9	9	32	1	79	1703	Mass.
Michigan	9	1	728	9	95	11	23	1318	92	136	19	1	3	86	2	3		1	7	24	8	3	36	2615	Mich.
Minnesota			315	2	28	1	4	456	21	96	5		1	16		1			5	10	8	2	5	976	Minn.
Mississippi		3	178		3	1		208	4	24				4						1		2		428	Miss.
Missouri	4	5	402	13	72	7	2	586	73	88	9	1	1	21	1			3	3	12	8		14	1325	Mo.
Montana			68		16	4	5	157	6	30	7	1		5	1	1				3	11	2	1	318	Mont.
Nebraska		1	191	1	21		1	210	16	54	2			3		1			2	6	6		5	520	Neb.
Nevada			10		12			19						1	1								2	45	Nev.
N. Hamp.	1	5	90	2	27	4	3	163	7	6	3			14		2	1	2	1	2	2		2	337	N. H.
New Jersey	33	34	500	10	130	27	15	871	72	57	73	9	5	85	6	5	15	8	10	13	33	3	86	2100	N. J.
N. Mexico			96		11	4		89	6	4				3					2		4			219	N. M.
New York	42	131	725	65	227	45	19	1298	118	150	118	29	7	94	1	3	17	40	18	28	57	8	99	3339	N. Y.
N.Ca'lina	2		303		31	2	1	362	15	16	1			4	1	2		1		3	3		8	755	N. C.
N. Dakota			101	3	8	1		117	12	68			1	4		1				2		1	1	320	N. D.
Ohio	27	29	614	15	114	15	11	1044	89	151	18	3	4	80	3	3	2	4	5	57	58	6	55	2407	Ohio
Oklahoma		5	413		57	5	10	460	19	88	2			16				1	5	25	8		5	1119	Okla.
Oregon	1		126		22	3	5	169	18	17	5			18		6			1	1	9		18	419	Ore.
Penn'vania	36	44	759	31	238	39	20	1422	95	170	108	8	13	135	10	7	32	45	12	32	52	5	67	3380	Penn.
Rh. Island	5	2	75	3	27	5	5	88	23	6	17			25		2	2	3	2		5	1	7	303	R. I.
S. Carolina			173		13	3	4	171	6	11	8			2						2	1		3	397	S. C.
S. Dakota			116		9	2		98	1	68	1			10				1		1	3			310	S. D.
Tenn.		1	162		16		4	168	11	21	2			6					1		6		10	408	Tenn.
Texas	8	4	1374	3	94	14	1	1159	51	316	10	1	1	45		4		1	4	51	12	1	4	3158	Texas
Utah			118		29	2		248	3	22	10			12		2			3	3	7	1	3	463	Utah
Vermont		4	61		20	5	2	87	4	28	4		2	16		2		2		6	3		3	249	Vt.
Virginia		8	339	2	23		2	356	9	24	2		1	12				4		2	6		1	794	Va.
Wash'gton			174		47	2	4	310	17	32	5		2	21	2	4			4	6	18		25	673	Wash.
W. Virginia		5	169	3	42		6	219	21	33	4		2	13		1		1	1	5		2	2	529	W. Va.
Wisconsin		3	509	28	76	6	6	773	46	113	4		8	41		1	11	7	5	15	7	2	16	1677	Wis.
Wyoming			33		10	1		83	3	13				6		1					1			151	Wyo.
Dist. of Col.	3	4	49	3	12			187	5	10	14	2	3	5		1	6	3		1	7		3	318	D. C.
1929 Totals	229	377	13232	308	2414	287	226	19510	1314	2698	693	68	64	1222	37	93	157	173	153	421	505	52	828	45061	1929
1928 Totals	217	301	12295	200	*2477		278	4837	1699	2216	581		60	1648	52		82	164	142	249	586	37	1034	29155	1928
1927 Totals	178	228	7978	109	*3706		316	10345	582	1360	551		69	498	115		66	126			606		1669	28502	1927
1926 Totals	241	267	4390	123	*4655		541	16926	264	1242	807		83	1429	99		66	119			793		1541	33586	1926

*Graham at that time. Ruggles and Yellow are included in the miscellaneous column.

Financial News of the Automotive Industry

Range of Automotive Stocks

WEDNESDAY, AUGUST 14

NEW YORK STOCK EXCHANGE

Previous 1929 High	Previous 1929 Low	Div.		Sales	High	Low	Close	Net Change
104⅜	27	....	Advance Rumely ...	2,000	34¼	32	33	+ 1⅜
119	40⅛	....	do pf.	500	47¼	46¼	47¼	+ 1¼
181¾	95⅛	3	Air Reduction	7,300	179⅞	176	177⅞	+ 1⅝
11½	4⅜	....	Ajax Rubber	1,000	4⅜	4⅛	4⅛	— ¼
284½	166	7	Alis Chalmers	1,200	273¾	269	270	+ ½
....	....	....	do pf.		No sales today			
73¼	40½	....	Am. Bosch Magneto.	3,400	64⅞	63⅛	63⅛	— ⅝
....	....	....	Am. Chain Class A..		No sales today			
86	70¼	7	do pf.	100	80½	80½	80½	— 2
8⅞	4½	....	Am-La France	600	5	4⅞	5	+ ⅛
432	221	4	Auburn	600	423½	420	421	+ 6
104⅜	78	2	Bendix Aviation	32,300	92¾	89⅝	90¼	— 1
136¾	110¼	3	Bohn Aluminum ...	1,700	119⅛	117	118¾	— ⅜
143⅜	107	4	Borg-Warner	15,000	123	119⅛	119⅛	— ⅛
63⅛	30¼	....	Briggs Mfg. Co.	4,700	34⅞	34	34½	....
73⅞	39½	3	Brockway Motor	1,000	40⅜	40	40	— ⅛
47	28¼	....	Chicago Pneu. Tool..	700	45¾	44⅞	45⅜	+ ⅜
....	....	....	Chicago Yellow Cab.		No sales today			
135	66	3	Chrysler Corp.	13,300	71⅛	69⅞	69⅞	— ½
....	....	....	do pf.		No sales today			
62⅝	43	2	Commercial Credit .	6,700	46½	45⅜	46	+ ¾
....	....	....	do pf.		No sales today			
195	131½	4	Comm'l Invest. Trust	25,300	178⅞	173¼	177⅜	+ 1½
....	....	....	do pf.		No sales today			
28⅜	13	.80	Continental Motors .	4,100	13⅞	13½	13⅝	— ⅛
....	....	....	Cutler-Hammer		No sales today			
202	155¾	4	Du Pont	6,100	189¾	187	187	— 3
76¾	56	3	Eaton Axle & Spring	500	60	58¼	58¼	— 1¼
174	126¾	6	Electric Auto-Lite...	7,300	153⅛	148	148	— 5
92⅞	77	5	Electric Stor. Battery	1,000	84⅞	83¾	83¾	— 1⅛
73¾	46⅛	2.50	Evans Auto Load ...	200	46¾	46	46¾	— ¼
....	....	....	Emerson Brant		No sales today			
....	....	....	do pf.		No sales today			
22⅜	13¾	.80	Federal Motors	800	14⅜	14	14	— ¼
20⅛	7⅛	....	Fisk Rubber	1,500	7⅜	7⅛	7¼	+ ⅛
....	....	....	do 1st pf.		No sales today			
33⅞	20	....	Gabriel Snubber ...	1,500	20⅝	20½	20½	— ½
399	219	4	General Electric	39,700	399	390	392	+ 3¼
25	10½	....	Gardner Motor	500	12½	12½	12½	....
91¾	66¼	3	General Motors	20,200	70¾	69⅝	69⅝	— ⅝
....	....	....	do pf.		No sales today			
126½	122½	7	do 7s pf.	100	124	124	124	— ⅛
64⅛	36⅞	1.25	Glidden Co.	7,600	58	57	57⅞	— ¼
....	....	....	do pf.		No sales today			
105¾	72¼	4	Goodrich	3,700	73½	72⅝	72⅝	— 1
....	....	....	do pf.		No sales today			
154½	104	5	Goodyear T. & R. ..	14,800	110	105⅛	105⅝	— 3⅞
104⅞	101	7	do pf.	400	101⅝	101¼	101⅝	+ ½
54	23½	....	Graham-Paige Motor	11,200	24	22⅛	22¼	— 1½
68⅜	28	8	Hayes Body	500	35	34	34	— 1¾
52¾	37½	1.50	Houdaille-Hershey .	3,200	43	41⅝	42	+ ⅝
93½	75⅛	5	Hudson Motor Car..	1,700	82⅝	82¼	82¼	— ⅝
82	38½	2	Hupp Motor Car....	4,700	42½	40¼	40½	— 2
32½	17¾	....	Indian Motocycle ..	500	19⅞	19½	19⅞	— ⅞
....	....	....	Intercon. Rubber		No sales today			
127	92	2.50	Interna. Harvester ..	8,400	121¾	117	118	— 2⅞
....	....	....	do pf.		No sales today			
242¾	152½	3	Johns-Manville	10,500	191	184⅝	188	+ 5½
16½	5⅝	....	Jordan Motor Car ..	300	6¼	6	6	— ⅛
24	10½	....	Kelly-Springfield ...	2,900	11⅝	11⅛	11⅜	+ ⅛
....	....	....	do 6s pf.		No sales today			
....	....	....	do 8s pf.		No sales today			
59¾	40¼	2	Kelsey-Hayes Wheel.	700	43⅜	43	43	+ ⅛
....	....	....	do pf.		No sales today			
25	10	....	Lee Rubber & Tire..	300	13	12⅜	12¾	— ¼
....	....	....	Link Belt		No sales today			
114¾	91	6	Mack Trucks	3,200	96¾	95½	96⅝	— ⅛
104	66¾	4	Marmon	1,900	81¾	78½	78⅞	— 1⅝
79⅞	69⅛	2	Marlin Rockwell	1,400	75½	74	75	— 1
18	7¾	....	Martin Parry	100	8½	8½	8½	— 1½
34⅞	20	....	Mengel	400	27½	27	27	....
28⅞	11⅝	....	Miller Rubber	300	13⅞	13½	13⅝	— ¼
8	3½	....	Moon Motors	100	3¾	3¾	3¾	— ⅜
31¾	26	....	Moto Meter G & E..	600	28	27¼	27¼	— ¼
....	....	....	Motor Products		No sales today			
55⅛	39	2	Motor Wheel Corp. .	300	51	50¾	50¾	— ⅛
81⅞	35	....	Mulins Mfg.	500	39⅞	38	39⅞	+ ⅜
100⅞	62	3	Murray Corp.	3,700	86	83⅝	85	— ½
113⅞	81⅛	6	Nash Motors	3,100	86⅞	85	85½	— 1⅛
....	....	....	do pf.		No sales today			
6¼	2	....	Norwalk T. & R. ...	500	2	1¾	1⅞	— ¼
....	....	....	do pf.		No sales today			
10⅞	6¼	....	Omnibus Corp.	3,600	8½	7⅜	8¼	+ ⅞
51⅜	37	....	Otis Steel	4,600	46½	45¼	45¼	— ¼
153¾	116½	3	Packard Motor Car..	8,700	138⅞	137⅜	138	+ ⅜
22½	11⅛	....	Peerless Motor Car..	400	13¼	12⅝	13¼	+ ⅝
37⅞	27½	....	Pierce-Arrow	300	32	32	32	— ½
....	....	....	do pf.		No sales today			
31⅞	20¼	.80	Reo Motors	2,300	22	21¼	22	+ ¾
12¼	6	....	Reynolds Spring ...	300	6⅞	6⅝	6¾	+ ⅛
66¾	45	....	Spicer Mfg. Co.	500	52½	52⅜	52⅝	+ ⅛
....	....	....	do pf.		No sales today			
77	64¾	2.50	Stewart-Warner Spd.	3,400	67	65¼	65¾	— 1½
....	....	....	Stromberg Carbure.		No sales today			
98	73	5	Studebaker Co.	3,800	74	73	73	— ¾
....	....	....	do pf.		No sales today			
31	22⅝	.80	Timken Detroit Axle	1,300	23⅞	23½	23½	— ½
110¾	73½	3	Timken Roller Bear.	600	102	99½	99½	— 2⅜
63	38¾	2.50	Trico	200	54⅞	54¾	54¾	— ¼
65	42	....	U. S. Rubber	6,600	46¼	45⅝	45¾	— 1
92½	70	....	do 1st pf.	800	70½	69½	70½	— 1½
42⅞	28½	2	Warner Quinlan	2,300	31¼	30¾	30¾	....
60½	43¼	2	Westinghouse A. B. .	24,400	62¾	60¼	61⅝	+ 1¾
53½	38	1	White Motors	300	39½	39½	39½	....
61¼	37	2.50	Wilcox Rich A	100	42½	42½	42½	— ½
62	34	2	do B	3,600	42¾	41⅝	42¾	— ¾
35	20	1.20	Willys-Overland	4,500	23¼	22¾	22¾	— ¼
....	....	....	do pf.		No sales today			
....	....	....	Yale & Towne		No sales today			
51¼	34⅜	....	Yellow Tr. & C. B...	4,800	36½	35½	35½	— ⅞
....	....	....	do pf.		No sales today			

NEW YORK CURB EXCHANGE

Sales		High	Low	Close	Net Chge
	Bendix Corp....	No sales today			
	Borg Warner...	No sales today			
	Briggs & Strat.	No sales today			
2500	Budd Ed	20⅜	20	20	+ ⅛
	Bullard Co	No sales today			
200	Caterpillar T...	84½	82	82¼	+ ¼
1200	Checker Cab....	60¾	60½	60¾	— ½
25400	Cities Service...	47⅞	47½	47⅞	+ ⅜
100	do pf	94	93⅝	94	+ ⅜
200	Con D Fibre....	38¼	38⅛	38⅛	— ¼
800	Doehler D C....	38	37⅛	38	+ ⅝
200	Durant Motor..	9⅝	9⅜	9⅜	— ⅛
	Fageol Motor...	No sales today			
	Fedders	No sales today			
	Federal Mogul..	No sales today			
300	Fiat	27	26¾	26¾	— ¼
175	Firestone	245	245	245	+ 1½
	do pf	No sales today			
600	Ford Canada...	43⅝	42½	43⅝	+ 1¼
45300	Ford Ltd	20⅝	18⅝	20	+ 1⅜
200	Franklin Mfg...	42½	42	42½	+ ⅝
	Gen T & Rub..	No sales today			
	Gr'nf'd T & D.	No sales today			
	Hall Lamp	No sales today			
	Henney	No sales today			
	Hood Rubber...	No sales today			
	India Tire	No sales today			
	Isotta Fias	No sales today			
	Jaeger	No sales today			
	Lakey	No sales today			
	Marvel Carb....	No sales today			
	McQuay Norris.	No sales today			
	Nat Rub Mach.	No sales today			
5100	Paramount Cab	23¼	21⅞	23	+ 1
	Perfect Circle...	No sales today			
	Pines Winter...	No sales today			
	Pitt Pl Glass...	No sales today			
100	Raybestos	122¼	122¼	122¼	+ 3½
	Rep M T ctfs...	No sales today			
	Rolls Royce Am	No sales today			
	Ross Gear	No sales today			
	Safe T Stat....	No sales today			
	Seiberling	No sales today			
	Sparks With ..	No sales today			
100	Stutz Motor ...	14⅞	14⅞	14⅞	+ ⅜
1000	Thermoid Co ..	32¾	31¼	32¾	+ 1⅝
	Thompson Prod.	No sales today			
300	Triplex	17⅞	17¾	17¾	....
200	U S Asbestos...	60	59	60	+ 5
100	Watson, J W...	3⅝	3½	3½	+ ⅛
	Wayne Pump...	No sales today			
100	West Auto	70	70	70	....
	Wire Wheel ...	No sales today			
	Yellow Taxi N Y	No sales today			

NEW YORK OVER THE COUNTER

Div.		Bid	Asked
6	Am Hard Rubber.....	78	81
10	Dixon (J) Crucible.....	170	175
3.50	Doehler D C.....	40	45
7	do pf	114	....
....	Eisemann Magneto	31	36
7	do pf	95	100
....	Manhattan Rubber	50	....
....	Rolls Royce Am.....	17	24
....	do pf	50	55
1.20	Smith (A O).....	247	253
....	Splitdorf Beth E.....	7½	8½
2	Wd La Fr Tr Co A.....	33	35

CHICAGO STOCK EXCHANGE

Sales		High	Low	Last
300	Allied Products	66	65	65½
1200	Allied Motor Ind...	49	48	48¾
200	do pf	52⅝	51½	52⅝
50	Ainsworth Mfg	54	54	54
520	Auburn Auto	425	412	420
3650	Bendix Aviation	92½	90	90
19400	Borg-Warner	122½	119	120
100	Chain Belt	49	49	49
50	Chi Rys, Ser 1.....	30	30	30
100	do Ser 2.....	3	3	3
13200	Chicago Corp	54⅜	52⅜	53⅜
1950	do pf	62	60	61
400	Cities Service	48	47½	48
150	Chicago Yellow Cab	30⅛	30⅛	30⅛
850	Houdaille Hersh A...	43½	42	42⅜
250	do B	42	42	42
50	La Salle Exten....	2¾	2¾	2¾
200	Modine Mfg	69	68¾	69
50	Mohawk Rubber ...	39⅞	38	39
950	Muncie Gear A.....	25	23¾	24⅜
800	do B	17	14¼	17
100	Muskegon M S.....	25½	25	25½
1350	Noblitt Sparks	54	52½	54
100	Pines W F.....	70	70	70
50	Van Sicklen	28	28	28
100	Warchell Corp	27½	26½	26½
10	Waukegon Motor ..	168	168	168
50	Wayne Pump pf....	38	38	38

CLEVELAND STOCK EXCHANGE

Sales		High	Low	Last
55	Apex Electric	27	27	27
10	Firestone 7s pf.....	108¼	108	108
120	Jaeger Machine	32¾	32¾	32¾

DETROIT STOCK EXCHANGE

Sales		High	Low	Last
160	Federal Screw	59½	59½	59½
212	Frost Gear	22	21	21
150	G R Metalcraft	11¾	11¾	11¾
579	Hall Lamp	23	22¾	22¾
390	Hutto Eng	18	18	18
160	Jackson M S.....	17½	17½	17½
1770	Packard new	28⅛	27⅞	27⅞
100	F B Stearns.....	37½	37½	37½
230	Timken Detroit Axle	24	24	24
55	do pf	109	109	109
100	Universal Products..	37	37	37
600	Wilcox Richards B.	42	41½	42

Rubber Prices

RUBBER EXCHANGE OF NEW YORK

	High	Low	Close	Prev. close
August.....	....	....	*20.20	20.20
September....	21.10	20.70	†20.70	20.70
October.....	....	....	20.80a20.90	21.00
November.....	....	....	*21.20	21.30
December.....	22.20	21.70	†21.70	21.70
January.....	22.00	21.90	21.80a21.90	21.80
February.....	....	....	*22.00	22.10
March.....	22.70	22.30	22.20a22.30	22.30
April.....	....	....	*22.50	22.60
May.....	23.70	23.10	22.80a22.90	22.90
June.....	....	....	*23.00	23.10
July.....	....	....	*23.20	23.30

*Nominal. †Trading.

OUTSIDE CLOSING PRICES

(Per pound, delivered New York)

Plantation—	Bid	Asked
Ribbed smoked sheets, spot....	20⅞	21⅛
August	20⅞	21⅛
September	21¼	21½
October-December	21½	21¾
January-March	22¼	22⅜
Spot—		
First latex	21⅞	22⅛
Thin pale latex.....	22⅛	22⅜
Clean thin brown crepe.....	17¾	18
†Specky crepe	17⅜	17⅝
Rolled brown crepe.....	12⅞	13⅛
No. 2 amber.....	18	18¼
No. 3 amber.....	17¾	18
No. 4 amber.....	17½	17¾
*Paras—		
Up-river, fine, spot.....	22	22½
do coarse	11½	12
Acera, fine, spot.....	22½	22¾
Caucho, ball—Upper	11½	12
Centrals—		
*Esmeraldas	11½	12
*Central scrap	11½	12
Guayule, washed and dried..	..	19
†Balata—		
*Block Ciudad	54	..
*Surinam sheet	56	..
*Manaos block	55	..
Peruvian block	21	22

SCRAP RUBBER

(Dealers' buying prices, f. o. b., New York.)

Boots and shoes, black, ton.....	$18.00a20.00
Arctics, cwt	.50a .60
Inner tubes, mixed, cwt.....	3.75a 4.00
Inner tubes, red, cwt.....	4.50a 4.75
Tires, standard, mixed, ton.....	18.00a19.00
Inner tubes, No. 1, cwt.....	7.00a 7.25
Inner tubes, No. 2, cwt.....	3.50a 3.75
Mixed hose, soft, cwt.....	.50a .55
Hose, air brake, ton.....	22.50a24.00

*Nominal. †Sold on sample only.

The A. D. N. Analyst Looks Them Over

IN this department will appear daily an analysis of one or more companies in, or closely allied to ,the automotive industry, covering the past history, present condition and future prospects of the companies so analyzed. It will be the purpose of the A. D. N. Analyst to deal with the smaller and less known manufacturing concerns, as well as with those more prominent, thereby giving analyses not to be found elsewhere. Readers who preserve their issues of Automotive Daily News will, through this department, build up a valuable fund of information about the financial standing of companies in the industry.

CITIES SERVICE COMPANY

IT will be difficult to give an adequate idea of the magnitude of the operations of the Cities Service Company in the space allotted for this article.

Cities Service Company itself is a huge holding corporation, controlling directly or indirectly a long list of public utility companies, including electric power and light, natural and manufactured gas and transportation service; and an important system of oil production, transporting, refining and marketing. It is seen, therefore, that this organization is a complete unit in the oil industry, in addition to extensive operations in the utility field.

The ramifications of this organization extend into practically every state in this country and into several foreign lands. Cities Service oils, for instance, can be purchased from service stations owned by the company in the following states: The District of Columbia and Ontario, Canada; Colorado, Connecticut, Delaware, Illinois, Indiana, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Virginia, West Virginia and Wisconsin. The public utility operations are largely in the Middle West.

Cities Service is a highly successful organization and, with such a widespread territory, it is not to be wondered at that it has built up a nation-wide confidence that has resulted in the stock of the company being bought by large and small investors in every community in the United States. The company has arranged for the marketing of the stock on a part-payment plan, which has proved exceedingly popular, particularly among the smaller investors.

The corporation is among the few in this country with more than 20,000,000 shares of common stock outstanding. It has an authorized capitalization of 50,000,000 shares of no par common stock, of which 22,270,544 shares are outstanding. This stock is traded in on the New York Curb Market, where it is selling at around $47 a share, after its recent rise from around $30.

In addition the company has an authorized capitalization of 1,000,000 shares of voting 5 per cent. non-cumulative $1 par stock, all of which is owned by Henry L. Doherty & Co. Also there is additional capital as follows: 1,500,000 shares of $6 cumulative preferred no par, of which 1,034,951 shares are out; 4,000,000 shares of preference B, no par cumulative stock, paying 60 cents dividend, of which 296,660 shares are outstanding, and 600,000 shares of preference BB, no par, paying $6, of which 63,053 shares are out. The company has a funded debt of $135,317,600.

Stockholders in April of this year voted to replace the 20,000,000 shares of $20 par stock then existing to 50,000,000 of no par, four new shares having been given in exchange for each of the old shares.

The management of Cities Service is progressive and the company's record of earnings in the past few years has been exceedingly impressive, showing a steady upward trend since 1920. Net available for subsidiaries and parent company reserves and parent company dividends in 1928 amounted to $29,650,000, as compared with $21,804,000 in 1926. An initial dividend of 2½ cents a share in cash and ½ per cent. in common stock, payable monthly, was declared on the new no par common stock. The common paid 10 cents a share per month and ½ per cent. in stock before the split-up.

The feature of operations in 1928 was the expansion of earnings in the utility field. Expansion in the oil industry has been a feature of 1929 thus far, with the purchase of several new oil properties. A new refinery is under construction in East Chicago.

During 1928 the company's established policy of expanding properties by buying other systems in adjoining territories was carried forward on a large scale, the principal properties added being the Tennessee Eastern Electric Company, Tecumseh Electric Company, Michigan; Arkansas Natural Gas Corporation, which company was formed to acquire a number of utility companies.

The company now controls more than sixty public utility properties and more than thirty companies representing an important system of oil production, refining and marketing. The subsidiary companies are controlled through stock ownership.

Public utility subsidiaries serve more than 900 communities in twenty states, having a population of more than 4,000,000.

Cities Service Company was incorporated on September 2, 1910, under the laws of Delaware.

The consolidated balance sheet of the system, as of December 31, 1928, showed current assets of $128,169,000, as compared with total current liabilities of $62,586,000, leaving an indicated net working capital of $65,581,000.. The current assets included $49,864,000 in cash, $36,476,000 in receivables and $30,674,000 oil in stock.. The working capital of more than $65,000,000 compared with $51,940,000 at the close of 1927. This increase was partly accounted for by the issue of additional Cities Service common stock. Book value of the common stock was $25.44 a share.

Gross earnings of Cities Service and its subsidiaries in 1928 reached a new high record of $167,255,000, comparing with $158,028,000 in 1927, with $140,309,000 in 1926, with $127,107,000 in 1925, and with $85,128,000 in 1921, the lowest year since the war.

Net income last year, before reserves but after interest charges, also reached a new high record at $42,321,000, compared with $41,259,000 in 1927, with $27,340,000 in 1926, with $21,690,000 in 1925 and with $11,798,000 in 1921.

Henry L. Doherty, whose genius has guided the corporation to its present position, is president. The main office is at 60 Wall St., New York city.

In addition to being traded in on the New York Curb, the Cities Service stock is listed on the Cleveland, Boston, Cincinnati, Columbus, Indianapolis, Louisville, St. Louis, London and Amsterdam stock exchanges.

1929 XUM

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	2650	Own	6	3¾x5	33.0	Pw	Str	Vac	Rem	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6 D
Am. La France W	3–4	3950	Own 2 R	4	4¼x6	28.9	P&S	Zen	Vac	A B	Own	C	4	Own	D R	47.4	D	R	160	7200	S 36x5	S 36x5 D
Am. La France S	4–4½	5200	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	8900	S 36x6	S 36x6 D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	9800	S 36x5	S 40x6 D
Am. La France Z	6½	5750	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	63.5	D	R	165	10000	S 36x7	S 40x7 D
Am. La France U	7½	6900	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	—	63.5	D	R	165	10500	S 36x7	S 40x8 D
Am. La Fran. Big Chief	6		Own	6	4½x6	43.6	Pw	Zen	Vac	Rem	Own	C	4	Own	D R	32.8	W	D	226	10600	S 40x8	40x8 D
Autocar S A	1½	2700	Her	6	3¾x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S A	Sp	27.9	4	R	150	4400	32x6	32x6
Autocar S D	2	3000	Her	6	3¾x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S D	D R	33.9	4	R	150	4850	32x6	32x6 D
†Autocar H	3	3750	Own	4	4½x5½	32.4	C S	Str	Gra	A B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
†Autocar S H	3	4000	Her	6	4⅛x4¾	40.8	Pb	Str	Gra	R B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
Autocar T	3	5000	Her	6	4⅜x4¾	45.9	Pb	Str	Vac	R B	Own T	U	4	Own T	D R	72.5	R	R	187	7100	36x8	36x8 D
†Autocar H S	3½	4100	Own	4	4½x5½	32.4	C S	Str	Gra	A B	Own T	U	4	Own J	D R	55.2	R	R	114	6900	34x6 S	36x12 S
†Autocar S H S	3½	4400	Her	6	4⅜x4¾	45.9	Pb	Str	Gra	R B	Own T	U	4	Own J	D R	55.2	R	R	114	7000	34x6 S	36x12 S
Autocar T S	3½	5350	Her	6	4⅜x4¾	45.9	Pb	Str	Vac	R B	Own T	U	4	Own Chs	D R	81.7	R	R	187	7100	36x8	36x8 D
Autocar S C M	5	5000	Her	6	4½x4¾	48.6	Pb	Str	Vac	R B	Own B	C	4	Own M	D R	72.1	R	R	162	8600	34x7 S	36x14 S
Brockway Junior	1	1195	Wis C	4	3¾x5	22.5	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36001	Sp	21.27	4	Tr	130	3100	30x5	30x5
Brockway J F	1	1195	Wis F	6	3¼x4¼	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36001	Sp	21.3	4	Tr	137	3450	30x5	30x5
Brockway C J B F	1½	1475	Wis F	6	3¼x4¼	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.3	4	Tr	149	3650	32x6	32x6
Brockway E	1½	1765	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 30	U	3	Col 55001	Sp	21.0	4	Tr	139½	3650	32x6	32x6
Brockway E N	1½	1965	Wis N	6	3½x4¼	29.4	Pb	Zen	Vac	Aut	Br-L 35	U	4	Col 55001	Sp	31.3	4	Tr	155¾	4400	32x6	32x6
Brockway S	2	2450	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	38.79	R	Tr	150¼	5100	S 34x4	S 34x8
Brockway S Y	2	2950	Wis Y	6	3⅜x5	27.3	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	35.3	4	Tr	151¾	4950	32x6	34x7
*Brockway K	3	3420	Con K	4	4⅛x5¼	27.2	Pw	Zen	Vac	Eis	Br-L 35	C	4	Tim 65700 S	Wo	41.5	R	D	154⅛	5855	S 36x5	S 36x10
Brockway K R	3	3625	Con L	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 65700 S	Wo	36.38	R	D	160⅜	6290	S 36x5	S 36x10
Brockway K W	3	3950	Wis H	6	4 x5	38.2	Pb	Zen	Vac	L-N	Br-L 51	U	4	Wis 69300	D R	33.7	R	D	170	6920	34x7	D 34x7
*Brockway R	4	4200	Con L	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 66600	Wo	46.8	R	R	164	7890	S 36x5	S 36x12
Brockway T	5–7	5200	Con B 7	4	5 x6	40.0	Pw	Zen	Vac	Eis	Br-L 60	C	4	Tim 68700	Wo	53.5	R	D	175	10065	S 36x6	S 40x14
Chevrolet	½	400	Own	6	3⅛x3¾	26.3	C S	Car	P	Rem	Own	U	3	Own	Sp	12.68	4	R	107	1815	4.50x20	4.50x20
Chevrolet	1½	545	Own	6	3⅛x3¾	26.3	C S	Car	P	Rem	Own	U	4	Own	Sp	30.05	4	R	131	2375	30x5	30x5
Commerce 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Commerce S 11 Y	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Commerce 30 Z	1½	2900	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Commerce 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vas	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Commerce 50 Z	2½	4415	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Commerce 60 Z	3	4430	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Commerce 70 Z	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Commerce 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Day Elder M F	1¼	1345	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 20A	U	3	Tim 52000 H	Sp	24.2	4	D	131	3100	30x5	30x5
Day Elder G F	1½	2050	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 20A	U	3	Tim 54000 H	Sp	28.3	4	D	156	3900	30x5	32x6
Day Elder H F	2	2500	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 35	U	4	Tim 63702 H	Wo	40.7	4	D	156	4400	S 34x4	S 34x7
Day Elder J F	3	3900	Con 18 R	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Br-L 51	U	4	Tim 65000 H	Wo	41.5	4	D	156	6560	S 36x5	S 36x10
Day Elder K 6	4–5	4775	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	Rem	Br-L 60	C	4	Tim 66702 D	Wo	55.2	R	D	170	8500	S 36x5	S 36x12
Diamond T 151	1	1095	Con 18 E	6	3⅜x4	27.3	Pb	Zen	Gra	Aut	Cov	U	3	Col	Sp	—	4	D	132	3200	30x5	30x5
Diamond T 290	1½	1475	Her W X A	6	3½x4½	29.4	Pb	Zen	Gra	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5 D
Diamond T 302	2	1650	Her W X B	6	3¾x4½	33.8	Pb	Zen	Gra	Aut	Cov	U	4	Clark	Sp	—	4	D	157¾	4600	32x6	32x6 D
Diamond T 502	2½	2675	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Wo	—	4	D	163	5850	34x7	34x7 D
Diamond T 505	2½	2875	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	D R	—	4	D	171½	5850	34x7	34x7 D
Diamond T 550	2½	2195	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Clark	Sp	—	4	D	165	5400	32x6	32x6 D
Diamond T 601	3	3510	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	A	4	Tim	Wo	—	4	D	163½	7400	36x8	36x8 D
Diamond T 605	3	3810	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	D R	—	4	D	161½	7400	36x8	36x8 D
Diamond T 700	3½	4850	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	A	4	Tim	Wo	—	R	D	162	8100	S 36x5	S 36x10
Diamond T 800	4	5325	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	A	7	Own	Wo	—	4	D	195⅜	8300	36x8	4WH 36x8
Diamond T 1000	5	5500	Her Y X C 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	A	4	Tim	Wo	—	R	D	170½	10000	S 36x6	S 40x12
Diamond T 2500	10–12	9750	Wak	6	5 x5¾	60.0	Pb	Zen	Gra	Aut	Br-L	A	7	Tim	Wo	—	4	D	194	13100	S 36x7	S4W 36x12
Dodge Bros.	½	665	Own	4	3⅜x4¼	21.03	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	15.2	4	D	110	1965	29x5.00 B	29x5.00 B
Dodge Bros.	¾	775	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	17.4	4	D	120	2510	31x5.25 B	31x5.25 B
Dodge Bros.	1	995	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	130	2920	30x5	30x5
Dodge Bros.	1	1065	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	140	2955	30x5	30x5
Dodge Bros.	1½	1345	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	150	3695	32x6	32x6
Dodge Bros.	1½	1415	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	165	3810	32x6	32x6
Dodge Bros.	2	1445	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	114	3725	32x6	34x7
Dodge Bros.	2	1545	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	150	3930	32x6	34x7
Dodge Bros.	2	1615	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	165	4070	32x6	34x7
Dodge Bros.	3	1745	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	46.3	4	D	135	4225	32x6	32x6 D
Dover	¾	595	Own	6	2⅜x4½	27.3	P&S	Mar	Vac	Aut	Own	U	3	Own	Sp	..	4	4	110	2150	30x5	31x5.50
Durant Com. Chassis	½	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Fargo Packet	½	545	Own	6	3 x4⅛	21.6	Pb	Str	Vac	N E	Own	U	3	Own	Sp	14.29	4	Tr	—	1835	5.00x19	5.00x19
Fargo Clipper	¾	725	Own	6	3⅛x4¼	23.4	Pb	Str	Vac	Rem	Own	U	3	Own	Sp	15.53	4	Tr	—	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4⅛	21.6	Pb	Str	Vac	N E	Own	U	4	Own	Sp	37.19	4	Tr	133	2785	6.00x20	32x6
Ford A A	1½	540	Own	4	3⅞x4¼	24.0	P&S	Zen	Gra	Own	Own	U	3	Own	Wo	°16.1	4	4	131½	2282	°6.00x20	32x6
F. W. D.—H	2	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	K	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3½x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6 S	36x6 S
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6 S	36x6 S
F. W. D.—U 6	3½	4575	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6 S	36x6 S
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7 S	40x5 S D
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6 S	36x6 S
F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	4	170	9500	36x8	36x8
Garford 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Garford S 11 Y	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Garford 30 Z	1½	2990	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Garford 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Garford 50 Z	2½	4419	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Garford 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Garford 70 Z	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Garford 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Gen. Mot. T 11-1001	*3800	625	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Pontiac	U	3	Pontiac	Sp	14.67	4	D	109⅝	1980	5.00x19 B	5.50x19 B
Gen. Mot. T 19-2001	*8000	1015	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3075	32x6	34x7
Gen. Mot. T 19-2002	*8000	975	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3000	30x5	30x5 D
Gen. Mot. T 19-2003	*6000	895	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	2925	5.50x20 B	32x6
Gen. Mot. T 30-3001	*10000	1530	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4200	32x6	36x8
Gen. Mot. T 30-3002	*10000	1505	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4125	32x6	32x6 D
Gen. Mot. T 30-3003	*8000	1395	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4075	6.00x20 B	34x7
Gen. Mot. T 42-4001	*12000	1885	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4690	32x6	38x9
Gen. Mot. T 42-4002	*12000	1790	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4640	32x6	32x6 D
Gen. Mot. T 42-4003	*10000	1685	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4510	7.00x20 P	36x8
Gen. Mot. T 60-5001	*16000	3215	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	38x7	44x10
Gen. Mot. T 60-5002	*18000	3160	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6425	36x8	36x8 D
Gen. Mot. T 60-5003	*14500	2800	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	36x6	36x6 D
Gen. Mot. K 102-6001	*28000	4250	Own 89	4	4½x6½	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	160	9520	36x6 S	40x14 S
Gen. Mot. K 102-6002	*28000	4350	Own 89	4	4½x6½	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	184	9600	36x6 S	40x14 S
Gramm B	1½	1395	Lyc S	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	32	4	R	140	3300	30x5	30x5 D
Gramm C	2	1795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	29	4	R	160	3800	32x6	32x6 D
Gramm D	2½	1995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	30	4	R	160	4920	32x6	32x6 D
Gramm E	3	2795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	35	4	R	150	5200	34x7	34x7 D
Gramm EY	3	3535	Con 20 R	6	4¼x4¾	36.04	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	26	4	R	190	6750	32x6	32x6 D
Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	28	4	R	210	7200	34x7	34x7 D
Gramm HY	5	9545	Con 16 H	6	4¾x5¾	54.15	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	25.2	4	R	236	9600	36x8	36x8 D
Gramm T-35	3	3595	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7100	36x5 S	36x10 S

1929 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Gramm T-45	4	3995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7600	36x5 S	36x12 S
Gramm T-60	5	4745	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	—	4	R	173	8700	36x6 S	36x14 S
*Hahn 24	1	1345	Her C	4	4 x5	25.6	Pb	Zen	Vac	Aut	Br-L 31	U	3	Eat 1002	Sp	—	R	R	138	3100	30x5	30x5
*Hahn 34	1½	2080	Her O	4	4 x5	25.6	Pb	Zen	Vac	Aut	Br-L 31	U	3	Eat 1504	Sp	—	R	R	150	3750	32x6	32x6
Hahn 465	2	2740	Con 6 B	6	3¾x5	33.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Eat 1504	Sp	—	R	R	160½	4300	32x6	34x7
Hahn 54	2½	3300	Her L	4	4½x5¾	32.4	Pb	Zen	Vac	R B	Br-L 51	U	4	Tim 65000	Wo	—	R	R	144	5600	36x4 S	36x8 S
†Hahn 56	2½	3440	Con 6 B	6	3¾x5	33.6	Pb	Zen	Vac	Rem	Br-L 51	U	4	Eat 2252	Sp	—	R	D	160	5300	32x6	32x6 D
Hahn L	3	3600	Her L	4	4½x5¾	32.4	Pb	Zen	Vac	R B	Br-L 51	U	4	Tim 65704	Sp	—	R	R	149	5900	36x5 S	36x5 S D
Hahn 76	3½	4790	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Vac	L-N	Br-L 51	U	4	Tim 65704	Wo	—	R	R	196	6500	34x7	34x7 D
Hahn M	4	4250	Her G	4	4¾x5¾	36.5	Pb	Zen	Vac	R B	Br-L 60	C	4	Tim 66700	Wo	—	R	R	160	7600	36x5 S	36x12 S
Hahn R	5	5100	Her G	4	4¾x5¾	36.5	Pb	Zen	Vac	R B	Br-L 60	C	4	Tim 66700	Wo	—	R	R	162	8800	36x6 S	40x6 S D
Hahn N	6	5200	Her G	4	4¾x5¾	36.4	Pb	Zen	Vac	R B	Br-L 60	C	4	Tim 66700	Wo	—	R	R	162	9200	36x6 S	40x6 S D
Indiana 200	1	1195	Wis F	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36000	Sp	20.71	4	Tr	137	3400	30x5	30x5
Indiana 300	1½	1475	Wis F	6	3¼x5¼	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.26	4	Tr	149	3650	32x6	32x6
Indiana 111 X W	2	1850	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Wis 4611	Sp	36.60	R	Tr	120	3830	32x6	32x6 D
Indiana 400	2	2495	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Aut	Br-L 35	U	4	Cla B 506	Sp	30.33	4	Tr	157	4800	32x6	34x7
Indiana 115 A	2½	2740	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	42.80	R	Tr	132	5000	32x6	34x7 D
Indiana 615 A	2½	3070	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	30.33	R	Tr	136	5190	32x6	34x7 D
Indiana 126	3	3495	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 557	C	7	Tim 65704	Wo	80.7	R	Js	162½	7400	36x5	36x10 S
Indiana 127	3	3190	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Cla B 720	Sp	41.72	R	R	141	6490	32x6	34x7 D
Indiana 626	3	4185	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 55	C	7	Tim 65704	Wo	80.7	R	Js	168½	7625	36x6 S	36x10 S
Indiana 627	3	3725	Wis H	6	4 x5	38.4	Pb	Str	Vac	Aut	Br-L 55	U	4	Cla B 720	Sp	42.80	R	R	162½	6500	36x5 S	36x10 S
Indiana 127 A W	3	3625	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	141	6800	32x6	34x7 D
Indiana 627 A W	3	3925	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	147	6800	32x6	34x7 D
Indiana 138	4	4380	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	162½	7850	36x5	36x12 S
Indiana 638	4	4955	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	168½	8100	36x5	36x12 S
Indiana 41	5	5460	Her G	4	4¾x5¾	36.1	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 68700 D	Wo	95.0	R	R	172	9600	36x6	40x12 S
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 502 R	Sp	15.1	4	4	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 1124	Sp	*52.6	4	4	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3520	30x5	32x6
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	4	Eat 2002	Sp	40.6	4	4	140	4000	32x6	32x6 D
Int. Harvester 54-C	2½	3200	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 428	Ch	51.8	R	D	140	6400	36x5	36x10
Int. Harvester 54	2½	3550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 54 65000	D R	53.7	R	D	140	6345	36x5	36x8
Int. Harvester 74-C	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	*86.0	R	D	154	8715	36x6	40x12
Int. Harvester 74	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 74 1000	D R	61.6	R	D	160	8175	36x6	40x12
Int. Harvester 104-C	5	4800	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	86.0	R	D	154	8890	36x6	40x14
Int. Harvester HS-54	2½	3850	H-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Eat 54 65000	D R	60.5	4	4	*148	8000	36x5	36x12 S
Int. Harvester HS-54-C	2½	3850	do 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Own A M 428	Ch	63.8	4	4	*148	8665	34x5 S	36x12 S
Int. Harvester HS-74	3½	4850	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Eat 74 1000	D R	70.5	4	4	*160	10700	34x5 S	36x7 D
Int. Harvester HS-74-C	3½	4850	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	79.1	4	4	*160	11000	34x6 S	36x7 D
Int. Harv's'r NS-104-C	5	5500	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	90.5	4	4	*160	11095	34x6	36x8 D
*Larrabee 20	1	1595	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	142	4170	30x5	30x5
*Larrabee 30	1½	1875	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	161	4550	32x6	32x6
*Larrabee 40	2	2965	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	176	5950	32x6	32x6 D
*Larrabee 50	2½	3285	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	183	6030	32x6	32x6 D
*Larrabee 60	3	3980	Con 18 R	6	4 x4½	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Tim	Wo	5.35	4	D	195	7140	34x7	34x7 D
*Larrabee 70	3½	4600	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	9.5	4	D	205	7740	34x7	34x7 D
Larrabee 80	5	5200	Con 21 R	6	4⅜x4¾		Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	—	4	D	205	9150	36x8	36x8 D
Mack BB	1½	3500	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp.	Opt.	4	D	165½	——	32x6	32x6 D
Mack BB	1½	3600	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp.	Opt.	4	D	177½	——	32x6	32x6 D
Mack AB	1½-2	3100	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Opt.	R	D	2-Opt.	——	36x4 S	36x7 S
Mack AB	1½-2	3550	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt.	R	D	2-Opt.	——	36x4 S	36x7 S
Mack AB	2½-3	3500	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Opt.	R	D	2-Opt.	——	36x4 S	36x8 S
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt.	R	D	2-Opt.	——	36x4 S	36x8 S
Mack BJ	3-4	5800	Own	6	4½x5½	48.6	P&S	Str	Vac	N E	Own	C	4	Own	D R	Opt.	4	D	3-Opt.	——	36x8	36x8 D
Mack AK	3½-5	5150	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4	Js	3-Opt.	——	36x5 S	36x5 D S
Mack AK	3½-5	5250	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	C	4	Own	D R	Opt.	4	D	3-Opt.	——	36x5 S	36x5 D S
Mack AC	3½-5	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x5 S	40x10 S
Mack AC	5½-7	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x5 S	40x12 S
Mack AC	7½	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x7 S	40x14 S
Mack AP	7½	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	Js	191	——	36x7 S	40x8 D S
Mack AB Tractor	5-6	3500	Own	4	4½x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Opt.	R	D	122½	——	36x4 S	36x4 D S
Mack AK Tractor	7-10	5150	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4	Js	128	——	34x5 S	36x5 D S
Mack AC Tractor	7-10	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x5 S	36x5 D S
Mack AC Tractor	11-14	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x6 S	36x6 D S
Mack AC Tractor	15	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x7 S	36x7 D S
Mack AP Tractor	15	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	R	Js	147	——	34x7 S	36x7 D S
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4 R	Js	2-Opt.	——	36x7 S	40x12 S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4 R	Js	2-Opt.	——	36x7	40x12 S
Moreland A-6	*6800	1275	Con 34 L	6	2⅞x4¾	19.84	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 52000 H	Sp	24.17	4	D	134	3000	32x6.75	32x6.75
Moreland R R-6	*9300	1850	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 54000 H	Sp	32.95	4	D	158½	4000	32x6	32x6
Moreland B-6	*12000	2200	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 63721 H	Wo	34.8	4	D	158½	4500	34x7	34x7
Moreland E-6	*15000	3600	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	4	Tim 65000 H	Wo	34.8	*4	D	182	6000	34x7	34x7 D
Moreland Ex. 6	*19000	3750	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	5	Tim 65704 N	Wo	46.0	*4	D	182	6500	36x4 S	36x8 S
Moreland E D -6	*23000	4900	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	5	Own	Wo	52.2	*4	D	196	8500	36x8	36x8
Moreland H-6	*22000	4650	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 55	C	7	Tim 66702 W	Wo	82.3	*R	D	196	8000	36x5 S	36x10 S
Moreland H D S-6	*30000	5850	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	81.6	*4	D	220	10500	36x6 S	36x8
Moreland S D-6	*34000	6450	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	89.0	*4	D	221	11500	36x7 S	36x10 S
Moreland T T-6	*34000	8000	Con 15 H	6	4½x5¾	48.6	Pw	Str	P	Aut	Br-L 70	C	7	Own	Wo	98.5	*4	D	221	12500	36x7 S	36x10 S
*Fleet Arrow F A-1	1½-2	2450	Own F A	6	3½x5	29.5	Pb	Str	A P	Rem	Own	U	3	Own	Sp	33.3	4	Tr	140	3950	32x6.00	34x7
*Pierce-Arrow F A-1	1½-2	2450	Own	6	3½x5	29.4	Pw	Str	P F	Del	Own	U	3	Tim	St	21.4	4	Tr	140	4100	32x6	32x6 D
*Pierce-Arrow X A-1	2	3500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	44.2	D	R	150	6750	36x4	36x5 D S
*Pierce-Arrow X B-1	3	3750	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	48.1	D	R	150	6830	36x5	36x5 D S
*Pierce-Arrow H B-1	5	4500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	7	Own	Wo	95.0	D	R	156	8400	36x5	36x6 D S
*†PierceArrow W C-1	4	5100	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	41.5	D	R	162	8780	36x5	36x6 D S
*†Pierce-Arrow R D-1	5	5400	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	40.5	D	R	162	9440	36x6	36x7 D S
*†Pierce-Arrow R F-1	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	168	10320	36x6	40x8 D S
†Pierce-Arrow R F-T	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	132	940	36x6	36x8 D S
Relay 20 B	1	1700	Bud H S 6	6	3⅛x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	25.7	4	D	142	4100	B 30x5	B 30x5
Relay S 11 B	1½	1900	Bud H S 6	6	3⅛x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	30.0	4	D	162	4500	B 30x5	D B 30x5
Relay 30 A	1½	2990	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5300	B 34x5	D B 34x5
Relay 40 A	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5500	B 36x6	D B 36x6
Relay 50 C	2½	4415	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7300	B 36x6	S 36x10
Relay 60 C	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7450	B 36x6	S 36x12
Relay 70 C	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8600	B 36x6	S 40x12
Relay 80 C	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8800	B 36x6	S 40x14
Reo B A	½	895	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	28x5.25	28x5.25
Reo D A	1	995	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	123	2755	30x5	30x5
Reo D C	1	1075	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	138	2850	30x5	30x5
Reo F A	1½	1295	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	137	3525	32x6	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	32x6	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	156	3750	32x6	32x6
Reo F H	2	1545	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6 D

1929 XUM

Major Specifications and Mechanical Details of 1929 Commercial Cars Built in the United States

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Reo F C	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6 D
Reo F D	2	1695	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6 D
Reo G A	3	2035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6 D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6 D
Reo G D	3	1985	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	46.2	4	Tr	134	4570	32x6	32x6 D
Republic Fleetmaster	*7000	1295	Lyc	6	3¼x4½		Pb	Zen	Vac	Aut	Br-L	U	4	Cla	Sp	28.3	4	Tr	144	3300	6.00x20 B	32x6
Republic F-1	*12000	2195	Lyc	6	3¼x4½		Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	43	4	D	155	4850	32x6	32x6 D
Republic H-1	*15000	2985	Lyc	6	3⅞x5		Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36	4	D	163	5750	34x7	34x7 D
Republic L-1	*18000	3595	Lyc	6	3⅞x5		Pb	Zen	Vac	Aut	Ful	U	4	Eat	D R	48.0	4	D	180	6900	36x8	36x8 D
Republic M-1	*20000	3800	Waukesha	6	4 x4¾		Pb	Zen	Vac	Aut	Br-L	U	5	Eat	D R	53	D	R	171	6900	36x8	36x8 D
Rugby Model 401	1	*775	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	14.79	4	4	107	2325f	23x4.75	28x4.75
Selden 7	¾–1	1098	Con 29 L	6	2⅞x4¾	19.8	Pb	Zen	Vac	Aut	Br-L	U	3	Tim	Sp	23.2	4	D	124	3100	30x5	30x5
Selden 17C	1–1½	1430	Con 18 E	6	3⅜x4	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	31.0	4	D	142	3750	30x5	30x5
Selden 37C	2–2½	1950	Con 15 C	6	3⅜x4⅜	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	31.0	4	D	151	4600	30x5	30x5 D
Selden 39C	2½–3	2898	Con 16 R	6	4 x4⅛	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	33.0	4	D	164	5800	32x6	32x6 D
Selden 47 CD	3½–4	3900	Con 18 R	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Wis	D R	41.7	4	D	164	6900	34x7	34x7 D
Selden 67C	4– 5	4950	Con 21 R	6	4⅜x4¾	45.9	Pb	Str	Vac	Aut	Br-L	C	7	Wis	D R	95.7	4	D	164	9000	36x8	36x8 D
Selden 77B	5–7	——	Con 16 H	6	4¾x5¾	54.1	Pb	Str	Vac	Aut	Br-L	C	7	Wis	D R	95.7	R	D	171	10000	36x8	S 36x12
Selden 47CB	3–3½	3700	Con 18 R	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	36.5	4	D	164	6700	34x7	34x7 D
Service 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Service S 11 Y	1½	1990	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Service 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Service 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Service 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Standard 2½ K	2½–3½	3200	Con K 4	4	4⅛x5¼	27.2	Pb	Str	Vac	Aut	Br-L	35 C	4	Tim 65600	Sp Wo	34.8	R	D	147	5400	36x5 S	36x8 S
Standard 3½ K	3½–5	4350	Con L 4	4	4½x5½	32.4	Pb	Str	Vac	Aut	Br-L	55 C	7	Tim 66700	Sp Wo	83.0	R	D	160	7485	36x5 S	36x12 S
Standard 5 K	5–7	5250	Con B 5	4	4¾x6	36.1	Pb	Str	Vac	Aut	Br-L	60 C	7	Tim 68700	Sp Wo	83.6	R	D	164	8700	36x6 S	40x14 S
*Stewart Buddy 21	¾	895	Lyc W S G	6	2⅞x4¾	19.8	Pb	Str	Gra	Rem	W-G	U	3	Sal	Sp	30.0	4	D	118	2694	30x5.50	30x5.50
*Stewart Buddy 21 X	1	995	Lyc W S G	6	2⅞x4¾	19.8	Pb	Str	Vac	Rem	W-G	U	3	Sal	Sp	30.0	4	D	128	2806	30x5	30x5
*Stewart 16	1¼	1295	Lyc C T	4	3¾x5	22.5	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
*Stewart 16 X	1¼	1295	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
Stewart 26 X W	2	2290	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5095	32x6	32x6 D
*Stewart 18 X	2½	2690	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5788	32x6	32x6 D
Stewart 19 X	3½	3590	Lyc F	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	C	12	Tim	Wo	105.1	4	D	165	6990	36x5	36x10
*Stewart 22 X	4	4200	Lyc F	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	U	12	Tim	Wo	34.8	4	D	165	7990	36x5	36x12
Stewart 28 X	1½	1495	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	136	3840	30x5	30x5 D
Stewart 29 X	2	1695	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	145	4188	32x6	32x6 D
Studebaker GN-P	¾	845	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	14.3	4	4	115	——	19x6.00	19x6.00
Studebaker GN-S	1	1045	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.8	4	Js	130	——	20x6.00	30x5
Studebaker GK-N	1	1095	Own	6	3⅜x4⅝	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.7	4	Js	146	2830	30x5	30x5
Studebaker GN-N	1¼	1245	Own	6	3¼x4¼	27.3	P C	Str	P	Rem	Clark	U	4	Clark	Sp	33.5	4	Js	146	——	30x5	32x6
Studebaker 77	2½	2285	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	158	4745	20x6.75 B	20x6.75 B
Studebaker 88	3	2985	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	184	4920	20x7.50 B	20x7.50
Studebaker 99	3½	3485	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	4	Eat	Dr	24.6	4	Js	184	5400	20x7.50 B	20x7.50
Victor 35	1½	1895	Con	6	3⅜x4	27.3	Pb	Zen	Vac	Rem	Cov	U	3	Tim	Sp	—	4	D	144	3200	30x5	30x5 D
Victor 45	2½	2495	Her	6	3¾x4½	33.7	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	148	4500	32x6	32x6 D
Victor 75	3½	3895	Her	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	162	6000	34x7	34x7 D
Whippet 96 A	½	380	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.75	4	R	103¼	1659	28x4.75	28x4.75
Whippet 6 C-101	1½	645	Own 98 A	6	3¼x3⅞	23.4	Pb	Til	Vac	Aut	Ful	U	4	Cla-B 364	Sp	33.5	4	R	131	2540	30x5	30x5
†White 15 B	1	1545	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3242	30x5	30x5
†White 57	1¼	2725	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3755	32x6	32x6
†White 20 A	1½	2125	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	D R	32.1	R	R	145½	4412	34x5	34x5 D P
†White 56	2	3125	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5096	36x4 S	36x7 S
†White 51 A	2½	3750	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.5	R	D	170	6256	36x5 S	36x8 S
†White 55	3½	4650	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	66.1	D	R	174	8402	36x5 S	40x5 S D
†White 52 T	3½	4700	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	76.5	D	R	129½	8126	36x5 S	40x5 S D
†White 52	5	5100	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	I G	92.3	D	R	174	9184	36x6 S	40x12 S
†*White 58	3	4400	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	49.5	D	A	180	7400	36x5 S	36x5 S D
†White 60	1	1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	3	Own	Sp	17.9	4	D	138	3562	30x5	30x5
†White 61	1½	2450	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	4	Own	Sp	23.4	4	D	148	4612	30x5	30x5 D
Willys-Knight 15	1½	1545	Own K G T	6	2⅞x4¾	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	134	3300	30x5	32x6
Willys-Knight 16	1½	1595	Own K G T	6	2⅞x4¾	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	151	3400	30x5	32x6
Willys-Knight 20	2	1945	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	150	3800	32x6	34x7
Willys-Knight 21	2	1995	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	164	3900	32x6	34x7
Willys-Knight 25	2½	2545	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	150	4920	32x6	32x6 D
Willys-Knight 26	2½	2595	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	164	5020	32x6	32x6 D

GENERAL NOTATIONS

*†**REFERENCE MARKS** apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons of fractions of tons. *Shows maximum allowable gross weight.

TIRE EQUIPMENT where not otherwise indicated is solid.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con, Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak, Waukesha; Wis, Wisconsin.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all bearings, including wrist-pins; P&S, pressure with splash; CS, circulating splash; Sp, Splash.

CARBURETOR—Car, Carter; Hol, Holley; Joh, Johnson; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; Stw, Detroit lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Pre, Pressure; Vac, Vacuum tank; P, Fuel pump, Auto-P, Auto pulse; E, Electric pump.

IGNITION — AB, American-Bosch; Aut, Electric Auto-Lite; Apo, Apollo; Del, Dayton Engine Laboratory; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; Rem, Delco-Remy; Spf, Splitdorf.

TRANSMISSION—Br L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G Warner Gear.

LOCATION—C, Center, Amid; U, in unit with engine; J, Jackshaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken; Wis, Wisconsin.

FINAL DRIVE—St, Straight bevel; Sp, Spiral bevel; Wo, Worm; DR Double Reduction; Ch, Chain; IG, Internal Gear.

BRAKES—Js, Jackshaft; R, Rear wheels; D, Drive shaft; 4 Four-wheel; Tr, Transmission; W, Westinghouse air brake.

TIRES—B, Balloon; D, Dual; S, Solid.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 24x7 tire, dual rear, weight 6,400. Price $3,900.

AUTOCAR

†Engines in these models are located under the driver's seat.

DURANT LINE

*Price includes panel body.

GENERAL MOTORS TRUCK LINE

*Capacity given in all cases is maximum allowable total gross weight (straight rating), and includes chassis, cab, equipment, body and load.

Model T-19 is also available in three other types, with 145¾-inch wheel base having same straight ratings and standard tire combinations as listed for the 127¾-inch wheel base types shown in the table.

Model T-30 is also available in six other types, with 152 and 164 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-42 is also available in nine other types, with 152, 164 and 175 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-60 is also available in nine other types, with 160, 180 and 200 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 140-inch wheel base types shown in the table.

Optional rear axle gear ratios are available for all types and optional tire equipment is available for all types except Model T-11-1001.

FLEET-ARROW LINE

*Model F. A. 1 is also available as Model F. A. 2, at $2,500 on wheel base of 160 inches, weight 3,975 lbs., and as Model F. A. 3, at $2,650, with seven speed transmission, on 180-inch wheelbase, weight, 3,985 lbs.

GRAMM

*Models B, C, D and E are furnished in three wheel base lengths—others on request.

*Model T Series—Larger engines, pneumatic tires and special wheel bases, and 8 speed transmissions—optional at extra cost.

Model "GY"—190 and 210 in. wheel bases.

Model "HY"—210 and 236 in. wheel bases.

*Model "HY"—210 and 236 in. wheel bases. Tire sizes and electrical equipment optional, depending upon type of service—Coach or Van.

*Above models are all built in tractor wheel base lengths for semi-trailer use.

HAHN LINE

*Model 23 also available as Model 26, priced $1,495, on 144-inch wheel base, with Buda H. S. engine, 6-cyl. 3⅝x4½ inches rated 27.3 h.p., weight 3,200 lbs.

*Model 34 also available as Model 36, with Buda H. S. 6 engine (described above), weight 3,850 lbs.

*Model 44 also available as Model 46, priced $2,410, on 156-inch wheel base, with Buda H. S. 6 engine, as in Model 26, weight 4,200 lbs.

†Model 56 also available on 171-inch wheel base.

INTERNATIONAL HARVESTER LINE

*Model HS-54 also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

*Model HS-54-C also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

†Frame is reinforced with inserted channels in each side rail, extending from dash to rear end.

*Model HS-74 also available in the following wheel bases, 144-inch tractor, 185, 210 and 235-inch.

*Models HS-74-C and HS-104-C also available in the following wheel bases, 146-inch tractor, 185, 210 and 235-inch.

All Model HS heavy-duty International truck models are equipped with built-in vibration dampered clutches.

LARRABEE

*Note—Bevel gear, worm or double reduction drive rear axle available in models 40 and 50. Bevel or double reduction axles available in 30. Worm axles in 60, 70 and 80. Three or more wheel bases in each model. All Larrabee models have hydraulic brakes; 40 up have vacuum booster.

MACK LINE

Other wheelbases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

Hyp.—Hypoid drive, single reduction.

PIERCE-ARROW LINE

*Model FA1 also available as Model FA2, at $2,550 on 160-inch wheel base, weight 4,150 lbs., and also as Model FA3, at $2,250 on 180-inch wheel base, weight 4,200 lbs.

*Model XA1 also available as Model XA2, at $3,550 on 162-inch wheel base, weight 6,800 lbs.

*Model XB1 is also available as Model XB2, at $3,800 on 180-inch wheel base, weight 6,900 lbs.

*Model HB1 is also available as Model HB2, at $4,550 on 180-inch wheel base, weight 8,500 lbs., and also as Model HB3, at $4,600 on 198-inch wheel base, weight 8,700 lbs.

*Model WC1 is also available as Model WC2, at $5,150 on 180-inch wheel base, weight 8,950 lbs., and also as Model WC3, at $5,250 on 198-inch wheel base, weight 9,050 lbs.

*Model RD1 is also available as Model RD2, at $5,450 on 180-inch wheel base, weight 9,650 lbs., and also as Model RD3, at $5,500 on 198-inch wheel base, weight 9,750 lbs.

*Model RF1 is also available as Model RF2, at $5,650 on 204-inch wheel base, weight 10,500 lbs.

†Seven-speed transmission also available.

REPUBLIC LINE

*Model 75-4 also available as Model 75-6, priced $1,495, on 124-inch wheel base, with Lycoming 4SL engine, 6-cyl. 3¼ by 4½ inches, rated 25.3 h.p., weight 3,150 lbs.

*Model 76-4, also available as Model 76-6, priced $1,675, on 150-inch wheel base, with Lycoming 4SL engine, as in Model 75-6, weight 3,500 lbs.

†Model 60-61, also available with four-wheel brakes, $3,155.

**Model 62, same as 60-61, on 171-inch wheel base, $3,040.

†Model 25W-25WRB available with four wheel brakes.

**Model 66, same as 65, on 200-inch wheel base, $3,750.

**Model 25W, 25WB and 25WBR also available in 3½-ton capacities as Models S25W, S25WB and S25WRB on wheel bases of 165, 156 and 124 inches, priced $3,695.

**Models 35 and 35B also available in 5-ton capacities on wheel bases of 170 and 157 inches, priced $5,145.

**Model 85 also available as Model 36 on 170-inch wheel base, price $2,150.

**Model 50-51 also available as Model 53 on 170-inch wheel base.

REO LINE

*Tonner in wheel base, 123, 138; 1½-ton in wheel base, 137, 156, 152; 2-ton in wheel base, 152, 168; 3-ton in wheel base, 168 179, 184.

RUGBY

F—Chassis weight includes body.

STEWART LINE

*Buddy 1-ton can be supplied in 138-inch wheel base.

*Models 16 and 16X can be supplied in 145-inch and 160-inch wheel base.

Model 28X can be supplied in 146, 160 and 176 inch wheel base.

Model 29X can be supplied in 160 and 176 inch wheel base.

*Model 26XW can be supplied in 148, 176 and 190 inch wheel base.

*Model 18X can be supplied in 148, 190 and 220 inch wheel base.

*Models 19X and 22X can be supplied in 148, 172, 190, 220 and 235 inch wheel base.

WHITE LINE

*Bus Model 52 is equipped with Booster Brakes and 50B and 54 with air brakes. Model 58 with air brakes as optional equipment.

Model 60 gross weight capacity, with 32x6 tires, 8,000 lbs.; 34x7.50 balloon tires optional at extra cost.

†Supplied in optional wheel bases.

FORD LINE

*Low speed axle 22.6 to 1.

Latest Engineering News of the Industry

Gives Data on Mixed Gas Inflammability

U. S. Bureau Has Technical Paper On Subject

THE results of numerous experiments made on the inflammability of gas mixtures, consisting of methane, hydrogen, carbon monoxide, nitrogen and carbon dioxide, combined in varying proportions, has just been made public by the United States Bureau of Mines, Department of Commerce. Data were obtained relative to the extinctive action of nitrogen and carbon dioxide on each of the three combustible gases, methane, hydrogen and carbon monoxide, and tables were prepared whereby the inflammable limits of each of these combustibles, when mixed with various proportions of inert gases (nitrogen and carbon dioxide) can at once be obtained. By the use of this data and the application of Le Chatelier's law for the calculation of the limits of inflammability when two or more combustibles are present it is possible to calculate the limits of inflammability of any gas mixture containing any or all of these gases and in any given proportion.

Mine fire gases vary greatly in composition, states G. W. Jones, in Technical Paper 450, "Inflammability of Mixed Gases," just published. Some do not contain enough combustibles to produce an inflammable mixture when mixed with air, whereas, others may be inflammable over wide limits. In general, each mine fire should be investigated separately and the atmosphere sampled from day to day after it has been sealed. Definite information may be obtained by taking a representative sample of the mine fire atmosphere every day or two, analyzing this sample, and then calculating its inflammability by the method given; in addition, determine within what oxygen limits the atmosphere is inflammable. When these oxygen limits have been determined, the oxygen content of the atmosphere should be kept well below the oxygen content found to render the mixture inflammable.

High percentages of methane raise the percentage of oxygen required to propagate flame, while high percentages of carbon monoxide and hydrogen lower the oxygen required. In general, mine-fire gases may vary in composition from those that are non-inflammable to those that have very wide inflammable limits.

When explosives are detonated in mines, gases consisting largely of carbon dioxide, nitrogen, carbon monoxide, hydrogen, and methane are produced. The amount of combustibles (carbon monoxide, hydrogen and methane) produced, depends largely on the ratio of combustibles to oxygen-producing constituents in the explosive, or the "oxygen balance" of the explosive.

Under most conditions explosives, particularly those used in metal mining, produce such a small proportion of combustible gases in comparison with the proportion of the inert gases, carbon dioxide and nitrogen, that the gases are non-inflammable. In coal mines, if the coal that is being broken down liberates very little methane, the resultant gases may or may not be inflammable, depending on the type of explosive used. An explosive, however, that does not liberate enough combustible gases to be inflammable because of the liberation of additional methane from the coal broken down.

The data obtained show that automobile exhaust gases at ordinary temperatures are inflammable when the air-fuel ratio is below about 11.75 and suggest the possibility of eliminating the toxic gas, carbon monoxide, from automobile exhaust gas for rather rich carburetor adjustments by the addition of air to the exhaust in the proportions given.

However, tests made on a great number of automobiles and trucks by the Bureau of Mines showed that the average carburetor adjustment gave an air-fuel ratio of 12.5 pounds of air to one of gas. With the advancement in carburetor design since these tests were made, it is very probable that the average adjustment is higher than this value. It is thus seen that for the average automobile or truck the exhaust gas is non-inflammable at ordinary temperatures. Preheating the admitted air or utilizing the sensible heat in the exhaust gases might possibly extend the inflammable area to some extent and thus widen the area of inflammability.

The gases resulting from mine explosions vary over wide ranges of composition, and each particular case will be different. An extensive coal dust explosion usually results in a large excess of combustibles, so that the extent of the combustion processes are limited largely by the amount of oxygen present. The gases under these conditions consist of very little oxygen, some carbon dioxide, rather large amounts of carbon monoxide, methane and hydrogen and large amounts of nitrogen.

In a mine under certain conditions two explosions may result from a single gas mixture. If the mixture contains a large excess of combustibles, the resultant gases on explosion will contain virtually no oxygen and large amounts of the combustibles, carbon monoxide and hydrogen. These combustible gases cannot be consumed because there is no oxygen to burn them. Now, if more air, say, from 30 to 50 per cent., is added to these explosive gases, these products from the first explosion become inflammable and will propagate flame—a possible explanation of secondary explosions, which sometimes follow primary explosions closely. A delayed secondary explosion in a gassy mine is more probably due to methane accumulating over a fire.

The data given in this paper are useful for determining the limits of inflammability of blast-furnace gas, which varies greatly in composition depending on the various conditions under which it is produced.

Although no check determinations have been made on gases other than those listed, the data should be equally applicable to many others. The explosibility of producer gas should be quite accurately calculated from the data given. This gas contains some unsaturated hydrocarbons, largely ethylene, but as the extinctive action of nitrogen and carbon dioxide on producer gas has not been investigated it is necessary in the calculations to consider the nitrogen and carbon dioxide in the mixture in connection with the other combustible gases of which the extinctive effect has been determined. In a similar manner illuminating gas containing rather large proportions of nitrogen and carbon dioxide should be fairly closely calculated from the data given. As for producer gas, the inerts should be considered with either the hydrogen, carbon monoxide, or methane and the inflammable limits determined as previously described.

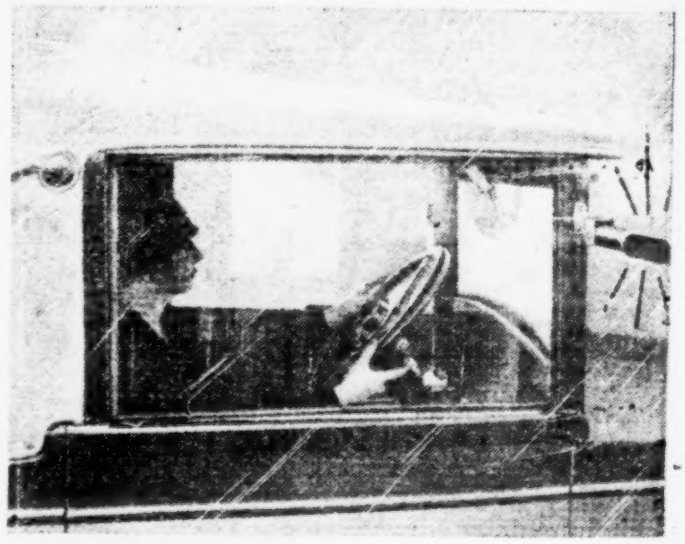
The information given in Technical Paper 450 should be of special importance in safety work—in the purging of gas tanks and other containers with inert gases so as to render the contained atmosphere safe from explosion hazards.

Note—Copies of Technical Paper 450, "Inflammability of Mixed Gases," may be obtained from the superintendent of documents, Government Printing Office, Washington, D. C., at a price of 10 cents.

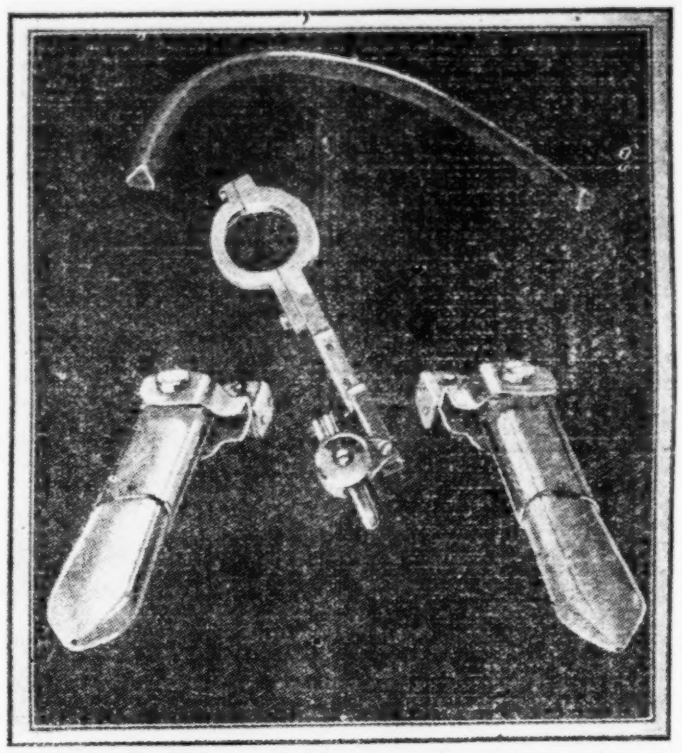
Whichway Signal Is Operated From Wheel

THE Whichway automatic signal arm is a new device for signaling the intention of the driver to make a left or right turn. It is so arranged that it is not necessary to take the hand from the steering wheel when the signal is to be made. The operating lever is attached to the steering wheel. The lever is operated by a slight pressure of the finger.

When pressed up the Whichway signal arm swings out to the left, signaling "left turn." Press down and the signal arm swings out to the right. Brackets holding the signal arms are attached to front windshield frame. Single-hole rubber tubing similar to windshield wiper hose is connected to manifold. Electric wires are run from each signal bracket to switch under dash, out of sight. The arms are illuminated and colored so that they can be easily seen, day or night.



WHICHWAY automatic signal arm attached to car and in operation to indicate turn.



SHOWING the Whichway signal arms and the necessary equipment for attaching.

GOODYEAR BUILDS A GIANT PENUMATIC TIRE

THE Goodyear Tire and Rubber Company has just built a giant tire 12 feet high and 4 feet in width, and a prominent airplane manufacturer states that the world will have use for such a standard pneumatic tire.

The casing weighs 1,800 pounds and the inner tube tips the scales at 125 pounds. It is mounted on a rim four feet in diameter and thirty inches wide and it took 45 minutes to inflate the casing to a pressure of only three pounds.

This giant tire has within it as much rubber as is used in eighty Ford casings. The non-skid diamonds on its tread are 16 inches by 10 inches. Were a selling price to be put on this tire, it must be in the neighborhood of a small fortune—$5,000. It has a load-carrying capacity of between 40,000 and 50,000 pounds. Mounted on a trailer behind a bus of special design, this tire will be displayed throughout the country. Goodyear engineers were restricted in their plans by the fact that some bridges through which the tire will pass on its tour have a clearance of only 12 feet 6 inches.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

POPE MARKETING FORD SPRING COVER AT $3

Pope Engineering Corporation of Cleveland are marketing a spring cover for Ford and other cars designed to prevent exposure to water and dirt from affecting the riding qualities of the car. The Ford set, which the makers state can be installed in a few minutes, sell for $3 per set.

POPE spring cover designed to protect Ford front and rear springs.

OIL-BATHED POINTS ON NEW G. E. SWITCH

THE General Electric Company announces a new oil-immersed magnetic switch of small capacity. This device is particularly suitable for use in gaseous atmospheres such as powder plants, chemical plants or in locations where highly corrosive gases or acids are encountered. It bears the designation CR-7006-V-7.

The new switch has a capacity of forty amperes and can be used with any motor, from 110 to 600 volts, the full-load current of which does not exceed this value. The contactor and interlock are standard in design. The overload relay used has oil-immersed contact tips in which the heaters are located above the oil level. The relay is reset from the top of the oil tank.

The inclosing tank is one-quarter-inch sheet metal with a flange for wall mounting. The tank is provided with a felt gasket to prevent the entry of dust.

FISK MARKETING NEW ENDLESS RUBBER FLAP

Springfield, Mass., Aug. 15.—The Fisk Rubber Company has put on the market a new all rubber endless flap to replace fabric flaps used in certain types of tires. Because of its elastic construction the new flap conforms to the outside contour of the tire as well as to the interior shape of the tube, thus overcoming the wrinkles which cause trouble in ordinary flaps. Composition of the new flap, the makers say, makes it tough and pliable.

WISCONSIN AXLES

Wisconsin superiority has been demonstrated for more than ten years; it can be demonstrated on any test. Built for trucks from 1½ tons to 7 tons, for busses and 6 wheelers.

WISCONSIN AXLE CO. Oshkosh, Wis.

CLARK

CLARK AXLES *and* METAL WHEELS *for commercial vehicles*

CLARK EQUIPMENT COMPANY
Buchanan Michigan

AXLES
Front & Rear
WHEELS
Single or Dual Tire
CAST STEEL HOUSINGS
TRANSMISSIONS

1929

Aviation Daily News

THREE AIR FIRMS IN CONSOLIDATION

Buffalo Flying School And Interest in Kinner in Deal

BUFFALO, N. Y., Aug. 15.—Major Reuben Fleet, president and general manager of the Consolidated Aircraft Corporation, announced yesterday that through stock transactions his company had acquired the Fleet Aircraft Corporation of Buffalo and the Thomas-Morse Aircraft Company of Ithaca, N. Y., and an inteerst in the Kinner Airplane and Motor Corporation of Glendale, Cal.

Besides this, Consolidated takes title to the National Flying Schools, Inc., which was organized by Major Fleet last winter and which now operates a flying school at Buffalo. Major Fleet announced also that Consolidated had acquired 100 acres of land in Canada, near Buffalo, suitable for a factory site and flying field. He contemplates establishing a Canadian factory.

The Fleet Aircraft Corporation, the announcement said, will continue in operation as a separate company and function as the selling organization for the Consolidated group.

Officers of Consolidated, beside Major Fleet are: G. Newman, vice-president and factory manager; Lawrence D. Bell, vice-president and general sales manager; Ray P. Whitman, assistant to the general manager, assistant general sales manager and advertising manager, and Thomas Kenney, secretary and treasurer.

The directors, in addition to Messrs. Fleet, Newman, Bell and Whitman, are: George M. Pynchon, Jr., of Pynchon & Co., which handled the purchase; Francis Dean Schnacko of Craighead, Cowden, Smith & Schnacko of Dayton, and Preston Lockwood of Davisson & Manice of New York.

F. L. Morse, president of the Thomas-Morse Company, is to join the directorate.

AGREE ON AIR MAIL TERMS WITH THE BREMEN

Washington, Aug. 15.—The North German Lloyd Line and the Post-Office Department have agreed upon the terms of a ship-to-shore air mail contract for the new liner Bremen which has left Bremerhaven on her second westward trip and is scheduled to reach New York August 20. She will sail from this port August 23 on her second crossing eastward. The French Line recently announced that a contract for a similar air mail service had been obtained for its flagship, the Ile de France.

E. C. Badger Appointed Special Assistant to H. L. Purdy of Marmon

Indianapolis, Aug. 15. — Appointment of E. C. Badger, assistant secretary and treasurer of the Marmon Motor Car Company, as special assistant to Hal L. Purdy, Marmon vice-president and general manager, has been approved by the company's board of directors at its quarterly meeting.

Mr. Badger will have charge of all major functions in the manufacture of Marmon and Roosevelt automobiles and will be the direct representative of Mr. Purdy in the Marmon factories.

Coincident with the announcement of Mr. Badger's advancement, a well-defined factory departmental organization was perfected through increasing the duties and responsibilities of several other men in high engineering and manufacturing positions. This new factory arrangement was made public by Mr. Purdy just after the director's meeting.

The key men in the new factory arrangement, all working directly under Mr. Purdy and Mr. Badger, are John W. Anderson, general factory superintendent; Max H. Thoms, chief inspector; E. C. Sudhoff, supervisor of materials; C. M. McAlpin, purchasing agent, and George H. Freers, assistant chief engineer. These men supervise the five major manufacturing functions of Marmon and Roosevelt automobiles and occupy offices in the main unit of the company's plants.

Air View of Latest Type Hangar

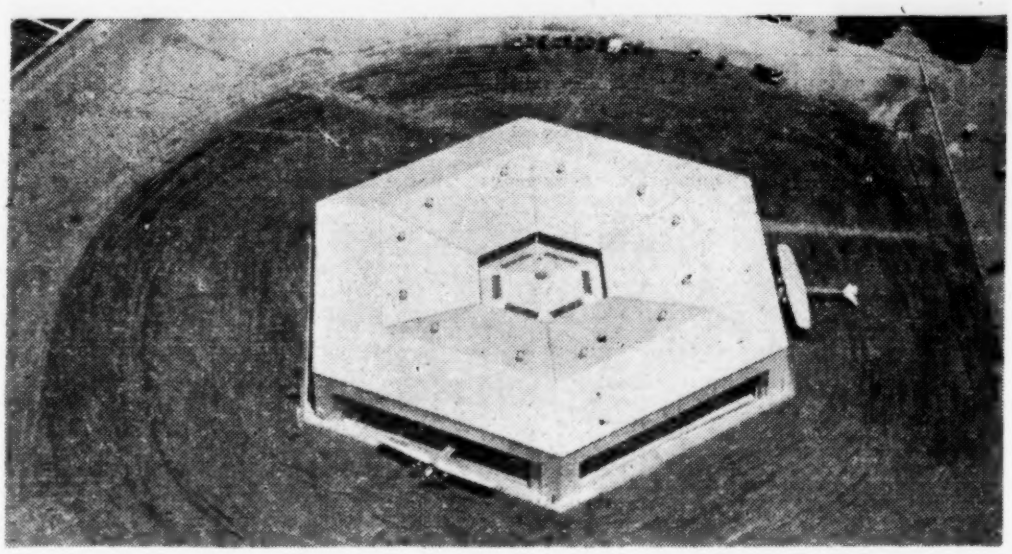


PHOTO SHOWS: An air view of the new hangar built for Western Air Express at Los Angeles. Each of the six sides has a self-opening steel door 126 feet wide, all of which can be opened in thirty seconds. Emptying the hangar of all planes takes one minute, for a sloping floor permits one man to handle a giant trimotor plane. It has 54,000 square feet of floor space—believed to be the largest plane hangar in the world. (U. & U.)

AIRCRAFT FINANCE NAMES LARGE ADVISORY BOARD

Los Angeles, Aug. 15.—The following have been elected to advisory board of Aircraft Finance Corporation: Paul E. Richter, Jr., director of Standard Air Lines; George E. Moreland, president of Moreland Aircraft, Inc.; Simeon W. Crabill, Jesse W. Schuckman; E. M. Bowman, William Hepner, W. B. Hart, Henry Lea, W. Cady Griffith, Dr. Dorington G. Little, W. H. Cutler, Theodore Fiske Peirce, Carl Wreden, Frank F. Carpenter, J. S. Craig, O. J. Rhode and Charles F. Chapman.

COMING EVENTS

AUGUST

16-31—**Rio de Janeiro.** Second Pan-American Congress of Highways.
23-Sept. 7—**Toronto, Canada.** National Motor Show at Transportation Building.
24-Sept. 2—**Cleveland, O.** National Air Races and Show.

SEPTEMBER

1-15—**Chicago, Ill.** International Aircraft Exhibition.
9-13—**Cleveland, O.** American Society for Steel Treating. Eleventh Annual Convention.
9-12—**Cleveland, O.** American Welding Society National Fall Meeting.
9-12—**Cleveland, O.** Institute of Metals Division, American Institute of Mining and Metallurgical Engineers. National fall meeting.
9-12—**Cleveland, O.** Iron and Steel Division, American Institute of Mining and Metallurgical Engineers. National fall meeting.
9-13—**Cleveland, O.** National Metal Exposition at Public Auditorium.
9-13—**Cleveland, O.** First Annual Metal Congress.
11-13—**Cleveland, O.** Iron and Steel Division, American Society of Mechanical Engineers National fall meeting.
15-21—**Springfield, Mass.** Eastern States Exposition.
28-Oct. 4—**Atlantic City, N. J.** American Electric Railway Association Convention.
30-Oct. 4—**Cleveland, O.** National Machine Tool Builders' Association Convention.

OCTOBER

2- 4—**Cleveland, O.** Society of Automotive Engineers' Production meeting.
3-13—**Paris, France.** Automobile show.
7- 8—**Erie, Pa.** Pennsylvania Automobile Association ninth annual convention.
12—**Tulsa, Okla.** Oklahoma Tire Dealers' Association meeting.
16-18—**Detroit, Mich.** Society of Industrial Engineers Convention.
17-26—**London, Eng.** Automobile show.
23-30—**Prague, Czecho-Slovakia.** Automobile show.
29-Nov. 22—**Tokio, Japan.** World Engineering Congress.
—**Sioux City, Ia.** Automobile Merchants' Association Convention.

NOVEMBER

4-9—**Chicago.** Motor & Equipment Association Annual Business Exhibit.
7-16—**London, Eng.** Truck show.
9-16—**Chicago, Ill.** Automobile Salon at Hotel Drake.
11-14—**Chicago, Ill.** National Tire Dealers Association Convention and Trade Exhibition at Sherman Hotel.
11-16—**Detroit, Mich.** National Standard Parts Association Show and Convention.
14-24—**Paris, France.** Truck show.

DECEMBER

1- 7—**New York.** Automobile Salon at Hotel Commodore.

JANUARY

25-February 1—**Cleveland, O.** Show at Public Auditorium, auspices of Cleveland Automobile Manufacturers and Dealers' Association.
29-31—**Cleveland, O.** Association of Commercial Haulers' convention, Cleveland Public Auditorium.

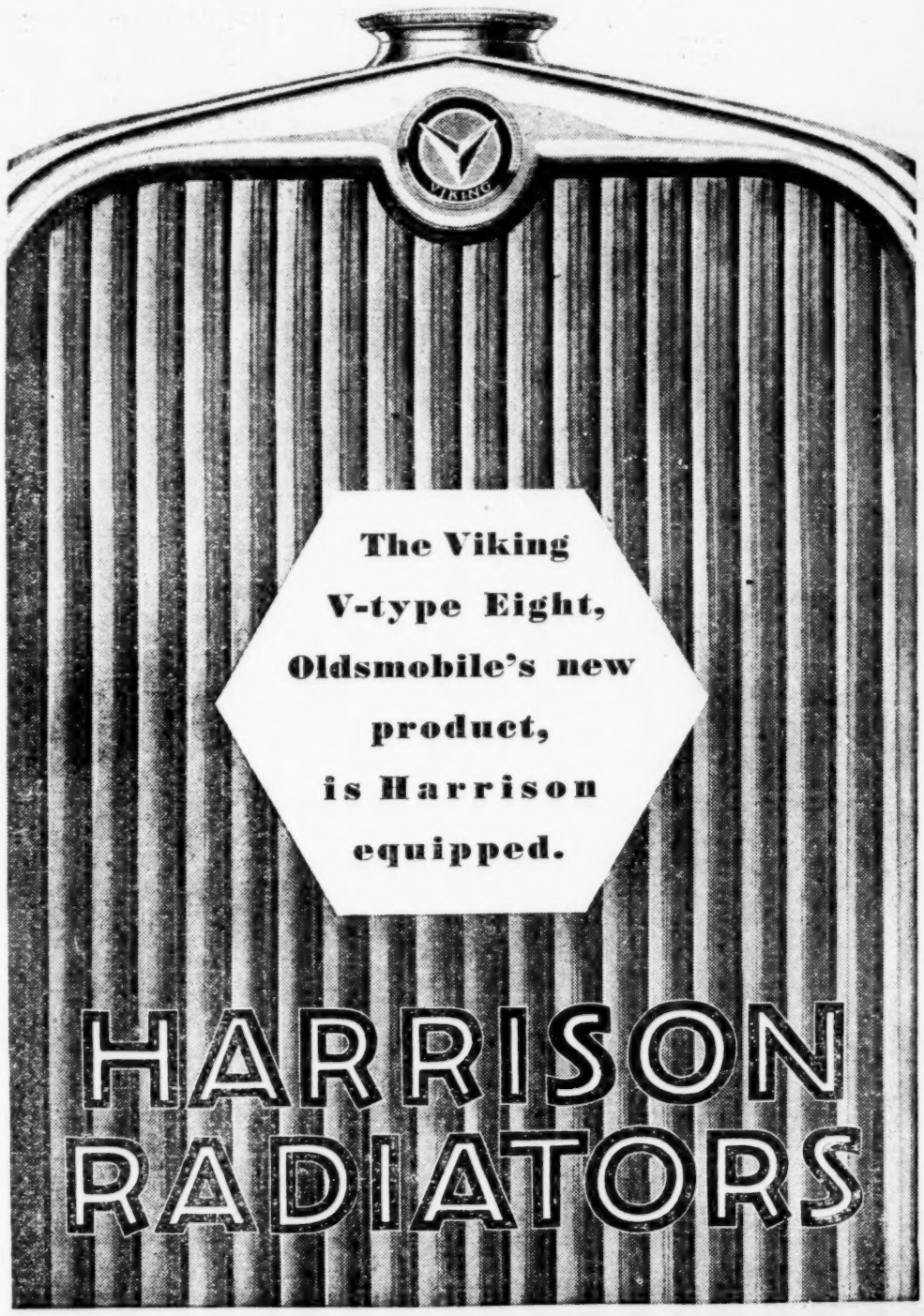
GRAF ZEPPELIN TO ACCEPT MAIL FROM UNITED STATES

Washington, Aug. 15.—The Post-office Department announces that mail will be accepted for dispatch from Los Angeles to Lakehurst and from Los Angeles to Friedrichshafen, Germany, the mail to be picked up at Los Angeles by the Graf Zeppelin. Mail also will be accepted for dispatch from Lakehurst to Friedrichshafen after the Graf Zeppelin has completed its round-the-world trip and makes the flight home.

"Fly-It-Yourself" Plane System Will Charge $15 an Hour

Lincoln, Neb., Aug. 15.—Tentative rental price for the airplanes to be used in the fly-it-yourself system of the Saunders Auto Hire system is $15 an hour, but this price may be raised or lowered as the company obtains additional information on cost of operation, according to officials of the company which recently signed a contract with the Arrow Aircraft & Motors Corporation of this city to furnish the company with 100 Arrow sport planes.

All of the Saunders planes will be green, trimmed in red, company officials announce. Planes will be available to all persons having pilot licenses, and the company plans to operate the fly-it-yourself service through the company's present automobile rental organization in 85 American cities. A subsidiary company may be formed later, however, if the business expands sufficiently, President Saunders of Kansas City explains.

Fly-it-yourself service was inaugurated August 11 at Fairfax Field, Kansas City, with four Arrows, which were sent to Kansas City immediately after the contract for 100 planes was signed. As additional planes are delivered the service will be extended to principal airports of the United States.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS